



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number

1-01

☐ Original ☐ Amendment Number:

Contract Number

EP-W-09-024

Contract Period

☐ Base ☒ Option Period Number: 1

Title of Work Assignment

See Comments

Contractor

Battelle Memorial Institute

Specify Section and Paragraph of Contract SOW

Purpose:

- ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance

From: 06/23/2010 To: 06/22/2011

Comments:

Title: Technical Support for EPA's Strategy to Eliminate Persistent Substances in the Great Lakes

This action approves the work plan dated 04/29/2011.

☐ Superfund

### Accounting and Appropriations Data

☐ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$314,704	2,230
This Action	\$134,470	1,013
Total	\$449,174	3,243

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 04/29/2011 Cost/Fee: \$134,470 LOE: 1,013  
Cumulative Approved: 06/03/2011 Cost/Fee: \$449,174 LOE: 3243

Work Assignment Manager Name  
E-Marie Wines

Branch/Mail Code

Phone Number (312) 886-6034

Fax Number

(Signature)

(Date)

Project Officer Name  
Cynthia Bowie

Branch/Mail Code

Phone Number (202) 564-7726

Fax Number

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Officer Name  
Christine Edwards

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-01	
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002	
Contract Number EP-W-09-024	Contract Period   06/23/2009   To   06/22/2011 Base                      Option Period Number   1	Title of Work Assignment/SF Site Name See Comments	
Contractor BATTELLE MEMORIAL INSTITUTE		Specify Section and paragraph of Contract SOW	
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From 06/23/2010 To 06/22/2011	
Comments: Title: Persistent Toxics Substances in the Great Lakes  The purpose of this action it to increase the LOE of this work assignment by 1,107 hours revising the LOE to 3,243 PLHs. A revised financial workplan is required.			
<input type="checkbox"/> Superfund		Accounting and Appropriations Data	
		<input checked="" type="checkbox"/> Non-Superfund	
SFO (Max 2) <input type="checkbox"/> Note: To report additional accounting and appropriations data use EPA Form 1900-69A.			
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)
		Budget Org/Code (Max 7)	Program Element (Max 9)
		Object Class (Max 4)	Amount (Dollars)
			(Cents)
			Site/Project (Max 8)
			Cost Org/Code (Max 7)
1			
2			
3			
4			
5			
Authorized Work Assignment Ceiling			
Contract Period:                      Cost/Fee:		LOE: 2,230	
06/23/2009 To 06/22/2011			
This Action:		1,013	
Total:		3,243	
Work Plan / Cost Estimate Approvals			
Contractor WP Dated:		Cost/Fee:                      LOE:	
Cumulative Approved:		Cost/Fee:                      LOE:	
Work Assignment Manager Name   E-Marie Wines		Branch/Mail Code:	
_____ (Signature) _____ (Date)		Phone Number   312-886-6034	
		FAX Number:	
Project Officer Name   Cynthia Bowie		Branch/Mail Code:	
_____ (Signature) _____ (Date)		Phone Number: 202-564-7726	
		FAX Number:	
Other Agency Official Name		Branch/Mail Code:	
_____ (Signature) _____ (Date)		Phone Number:	
		FAX Number:	
Contracting Official Name   Christine Edwards		Branch/Mail Code:	
_____ (Signature) _____ (Date)    4/19/2011		Phone Number: 202-564-2182	
		FAX Number:	



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number

1-01

☐ Original ☒ Amendment Number: 2

Contract Number

EP-W-09-024

Contract Period

☐ Base ☒ Option Period Number: 1

Title of Work Assignment

See Comments

Contractor

Battelle Memorial Institute

Specify Section and Paragraph of Contract SOW

Purpose:

- ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Assignment Approval

Periods of Performance

From: 06/23/2010 To: 06/22/2011

Comments:

Technical Support for EPA's Strategy Elimination of Persistent Toxic Substances in the Great Lakes

This amendment removes the cap previously placed on this work assignment. The total approved cost \$314,704.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 5)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$296,563	2,230
This Action	\$ 18,142	0
Total	\$314,704	2,230

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 07/08/2010 Cost/Fee: \$314,704 LOE: 2,230

Cumulative Approved: 07/08/2010 Cost/Fee: \$314,704 LOE: 2,230

Work Assignment Manager Name

E-Marie Wines

Branch/Mail Code

Phone Number 312-886-6034

Fax Number

(Signature)

(Date)

Project Officer Name

Cynthia Bowie

Branch/Mail Code

Phone Number 202-564-7726

Fax Number

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Officer Name

Christine Edwards

Branch/Mail Code 3803R

Phone Number 202-564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

**EPA**United States Environmental Protection Agency  
Washington, DC 20460**Work Assignment**

Work Assignment Number

1-01

☐ Other☒ Amendment Number:

000001

Contract Number

EP-W-09-024

Contract Period 06/23/2009 To 06/22/2011

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

See Comments

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and paragraph of Contract SOW

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 06/23/2010 To 06/22/2011

Comments:

Technical Support for EPA's "Strategy for the Virtual Elimination of Persistent Toxics Substances in the Great Lakes"

This amendment removes the cap previously placed on this work assignment. The total approved cost is \$314,704.



Superfund

## Accounting and Appropriations Data



Non-Superfund

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

SFO

(Max 2)



Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										

## Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 2,230

06/23/2009 To 06/22/2011

This Action:

0

Total:

2,230

## Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee:

LOE:

Work Assignment Manager Name E-Marie Wines

Branch/Mail Code:

Phone Number 312-886-6034

FAX Number:

(Signature)

(Date)

Project Officer Name Cynthia Bowie

Branch/Mail Code:

Phone Number: 202-564-7726

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Christine Edwards

Branch/Mail Code:

Phone Number: 202-564-2182

FAX Number:

(Signature)

(Date)

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

## Work Assignment

☐ Original ☒ Amendment Number: 1Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Technical Support for EPA's "Strategy for  
the Virtual Elimination of Persistent Toxics  
Substances in the Great Lakes"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
See attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance

From: 06/23/10

To: 06/22/11

Comments:

This amendment partially approves the Technical and Financial Work Plan dated 08 July 2010, at a cost of \$314,704.00. Currently, there are 2,226 Professional Labor Hours approved for this Work Plan, and the Total Cost is capped at \$279,000.00.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 6)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	2,230
This Action	\$279,000.00	(4)
Total	\$279,000.00	2,226

## Work Plan / Cost Estimate Approvals

Contractor WP Dated: 07/08/10	Cost/Fee: \$314,704.00	LOE: 4
Cumulative Approved: 08/10/10	Cost/Fee: \$279,000.00	LOE: 2,226

Work Assignment Manager Name

Branch/Mail Code G-17J

E. M. WINES

Phone Number (312) 886-6034

(Signature)

(Date)

Fax Number

Project Officer Name

Branch/Mail Code 7404T

SINETA WOOTEN

Phone Number (202) 566-0501

(Signature)

(Date)

Fax Number (202) 566-0469

Other Agency Official Name

Branch/Mail Code

Phone Number

(Signature)

(Date)

Fax Number

Contracting Official Name

Branch/Mail Code 3803R

CHRISTINE EDWARDS

Phone Number (202) 564-2182

(Signature)

(Date)

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for EPA's "Strategy for the Virtual Elimination of Persistent Toxics Substances in the Great Lakes"**

Contract: EP-W-09-024, Work Assignment: 1-01, Amendment: 0001

---

## **Summary Information**

Title: "Technical Support for EPA's "Strategy for the  
Virtual Elimination of Persistent Toxics  
Substances in the Great Lakes"

Period of Performance: From: 06/23/10  
To: 06/22/11

Award Date: 06/23/10

Total Funding:

## **WA Totals**

*The following item(s) have been added:*

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	

## **WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 2230 to 2226.

United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Assignment Number

☒ Original ☐ Amendment Number:

Title of Work Assignment

"Technical Support for EPA's "Strategy for  
the Virtual Elimination of Persistent Toxics  
Substances in the Great Lakes"

Contract Number

EP-W-09-024

Contract Period

Base

Option Period Number:

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

See attached Statement of Work

Purpose:

☒ Work Assignment Initiation ☐ Work Assignment Close-Out☐ Work Assignment Amendment ☐ Incremental Funding☐ Work Plan Approval

Periods of Performance

From: 06/23/10

To: 06/22/11

Comments:

Work Assignment Initiation

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 5)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee

LOE

Previously Approved

This Action

Total

\$0.00

2,230

## Work Plan / Cost Estimate Approvals

Contractor WP Dated :

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee: \$0.00

LOE: 2,230

Work Assignment Manager Name

Branch/Mail Code G-17J

Phone Number (312) 886-6034

Fax Number

(Signature)

(Date)

Project Officer Name

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for EPA's Strategy for the Virtual Elimination of Persistent Toxics Substances in the Great Lakes"**

Contract: EP-W-09-024, Work Assignment: 1-01

---

## **Summary Information**

Title: "Technical Support for EPA's "Strategy for the  
Virtual Elimination of Persistent Toxics  
Substances in the Great Lakes"  
Period of Performance: From: 06/23/10  
To: 06/22/11  
Award Date:  
Total Funding:

## **Procurement Management Roles**

### **WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: E. M. WINES  
77 WEST JACKSON BLVD  
CHICAGO, IL 60604

Mail Code: G-17J  
Phone Number: (312) 886-6034  
Fax Number:  
E-Mail Address: wines.e-marie@epa.gov

## **Attachments**

Attachment Name

---

Support for "Strategy for the Virtual Elimination of Persistent Toxics  
Substances in the Great Lakes"

# **Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances in the**

Contract: EP-W-09-024, Work Assignment: 1-01

---

## **Title: Technical Support for EPA's "Strategy for the Virtual Elimination of Persistent Toxics Substances in the Great Lakes"**

**Purpose:** This work assignment supports the Great Lakes Binational Toxics Strategy (also, Strategy, or GLBTS), which in turn complements and contributes to the Agency-wide Persistent, Bioaccumulative and Toxic Chemicals (PBT) Strategy. The PBT Strategy targets the Level I substances list of the GLBTS, as well as other toxic substances, for activities and actions relating to the reduction of these substances in the environment.

### **I. Background**

EPA's Great Lakes National Program Office (GLNPO), located in Chicago, acts as the Agency's knowledge center for a geographic area, the Great Lakes watershed. In keeping with the objectives of the Great Lakes Water Quality Agreement (GLWQA) to "virtually eliminate" the discharge of persistent toxic substances into the Great Lakes basin, in 1993 GLNPO began the "Virtual Elimination Pilot Project". GLNPO developed technical, research and policy reports which laid the theoretical groundwork for the GLBTS, and by extension, the PBT Strategy.

On April 7, 1997, Administrator Browner and the Canadian Minister of the Environment March signed the GLBTS. In line with the GLWQA, the GLBTS calls for reduction and virtual elimination of targeted persistent toxic substances in the Great Lakes basin. Several substances are targeted for percentage reductions within a ten-year time frame on the path to virtual elimination.

Implementation of the GLBTS entails in part a four-step analytical process for assessing sources of the Level I toxic substances, summarizing regulatory incentives and disincentives, and promoting appropriate actions by Stakeholders.

EPA is also drafting a strategy on how to improve the assessment of potentially toxic substances in the Great Lakes (GL). Historically, a majority of the effort in the GL has focused on chemical monitoring programs which provide extensive spatio-temporal information on chemicals selected for monitoring. However, relatively little work has been systematically conducted to determine the biological effects that may be occurring as a result of exposure to potentially toxic substances in the GL. A major emphasis of this strategy is to provide the rationale and approaches to improve systematic, effects-based information as a complement to the chemical monitoring information. Specific sections of the strategy document require additional effort to identify information in the literature relevant to the analysis, summarize that information, and utilize the information to improve the comprehensiveness of the GL strategy document. Two specific areas require additional effort and are detailed as specific tasks below.

### **II. Scope of Work**

The Contractor shall perform the tasks as listed below. This work assignment continues efforts performed under Work Assignment 01. No work performed under previous work assignments will be duplicated under this work assignment.

#### **Task 1: Task Management**

The Contractor shall prepare and submit a work plan in accordance with the requirements of this contract. The Contractor shall also participate in general planning conference calls and on-site meetings, prepare monthly progress reports, and conduct other task management activities.

The Contractor's monthly progress reports shall provide a breakdown of costs for each subtask and for each workgroup. Costs shall be provided on a bimonthly basis. If the Contractor determines that there are insufficient hours allocated to complete any given task, the Contractor shall convey this information to the EPA WAM as soon as possible.

# Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances" in the

Contract: EP-W-09-024, Work Assignment: 1-01

---

The Contractor shall ensure that appropriate quality assurance measures are taken. Deliverables are expected to be of high quality and to contain a minimum of errors (unless the document requested is simply an interim draft).

The Contractor shall ensure that documents to be posted on the web are constructed on GLNPO's EXTRANET, <http://chicago.glnpo.net/bns/>. GLNPO will establish an account for the Contractor's use.

The Contractor shall submit all final reports/documents as Microsoft Word and Adobe Acrobat Portable Document File, via email and/or disk.

The Contractor shall assist EPA in assuring that there is proper coordination between the GLBTS and the PBT Strategy, other EPA efforts such as Lakewide Management Plans (LaMPs) and Remedial Action Plans (RAPs), and with other international toxics reduction efforts such as the work being done on Persistent Organic Pollutants (POPs) and by the Commission for Environmental Cooperation (CEC), etc.

The Contractor shall assist EPA in assuring that the many tasks to be carried out under this work assignment are completed in accordance with the overall GLBTS schedule, and that information obtained in support of any GLBTS-related task is also made available to all other relevant parties. In other words, the Contractor shall help assure that "economies of scale" are realized, and that the implementation of the GLBTS is carried out as efficiently as possible.

The Contractor shall assist EPA with reporting and with outreach/communication efforts, and shall provide substance-specific workgroup support, technical support and analyses, support for public meetings, and support to LaMPs (upon further direction by the WAM). The Contractor shall also assist EPA in its efforts to meet the long-range transport and sediment challenges delineated in the GLBTS (upon further direction by the WAM).

## Task 2: Reports

Upon further direction by the EPA WAM, the Contractor shall make modifications to the GLBTS Step 3 reports, Management Assessment Report, and other reports produced in the effort to assist the GLBTS Workgroups. The schedules for delivering these report modifications will be provided by the WAM at the time of assignment.

## Task 3: Work Group Support

The Contractor shall assist EPA's workgroup leaders. The Contractor shall help the workgroup leaders to prepare for meetings and/or workshops with their workgroups, facilitate workgroup meetings, and provide minutes from the meetings (unless otherwise directed). They shall also provide technical and administrative assistance to the workgroup leaders as requested. The Contractor shall continue to report the amount of effort expended in support of each of the chemical-specific work groups, whenever such a breakdown is possible. The following are the named EPA work groups:

- |                              |                                       |
|------------------------------|---------------------------------------|
| • Mercury                    | -B(a)P/HCB                            |
| • Pesticides                 | -Dioxins/Furans                       |
| - Burn Barrel Sub-workgroup  |                                       |
| • OCS                        | -PCBs                                 |
| • Sector Workgroup           | -Substance Workgroup                  |
| • GLBTS Management Framework | Monitoring and Surveillance Workgroup |
| • Integration Workgroup      |                                       |

## Task 4: Outreach and Communication

# Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances in the

Contract: EP-W-09-024, Work Assignment: 1-01

---

Upon further direction by the EPA WAM, the Contractor shall assist in the development of strategies for outreach to industry, States, Tribes, environmental groups and other non-governmental organizations, the public, and other stakeholders.

The Contractor shall assist EPA in its communication efforts as directed by EPA WAM. This shall include updating the stakeholder database so that it is easily used to reach stakeholders via e-mail, sending messages to stakeholders, gathering responses, preparing documents for public use, etc.

Workgroup Activity Updates, as directed by the WAM, the contractor shall prepare a draft and final bi-annual "Updates". These "Updates" will be completed for distribution at the bi-annual GLBTS Stakeholder Forum meetings.

## Task 5: Technical Support and Analyses

**A. Technical Support and Analyses:** The Contractor shall provide technical support to EPA to assist in carrying out the implementation of the GLBTS. The Contractor shall develop and analyze innovative and non-regulatory strategies for the reduction and virtual elimination of the Level I and Level II GLBTS substances. This analysis shall be conducted in such a way as to facilitate communication and involve stakeholders. Emphasis should be on how to actually effect change -- what incentives to use to get stakeholders to change practices, and how to implement specific actions at the Lake, State and local levels to achieve reductions. Much of this analysis will be incorporated into the reports discussed earlier.

**B. Effects-Based Monitoring Tools for Ecological Risk Assessment**  
Environmental monitoring efforts for potentially toxic pollutants historically have relied on chemical measurements in different matrices (water, sediment tissue). However, there are some important drawbacks to only using analytical approaches to monitor for contaminants of possible concern, including (1) lack of detection of "unknown" chemicals possibly responsible for adverse biological effects, (2) uncertainty that measurements of known chemicals have adequate detection limits compared to concentrations that elicit possible biological effects, and (3) inability to reconstruct possible biological effects of chemical mixtures. Past regulatory and monitoring efforts have recognized these drawbacks and addressed them through the use of biological effects-based testing to complement chemical analyses. For example, whole effluent toxicity testing is routinely used in permitting surface water discharges to address the uncertainties associated with a chemical monitoring alone.

The purpose of this task is to conduct a review of existing literature to identify biological effects-based tests and endpoints that have been or can be used for environmental monitoring of aquatic vertebrates and invertebrates. These tests could include lab-based *in vitro* or *in vivo* assays using complex mixtures from the field, such as discharge or receiving waters, sediments/sediment fractions, and even tissue extracts. Samples also could be from organisms held *in situ* (e.g., caged fish studies), or animals collected from extant populations. From these types of systems many molecular, biochemical, histological and apical endpoints could be considered. The endpoints might be "generic" in that they reflect multiple chemical stressors, or they could be "specific" in terms of capturing defined biological pathways of concern. An example of a generic biological endpoint would be acute lethality as measured, for example, via biological tests, like those used for effluent permitting and dredged material assessment programs. An example of a more specific endpoint would be vitellogenin (VTG) expression in male fish, which is an indication of exposure of the animals to one or more estrogenic chemicals.

In addition to identifying *in vivo* and *in vitro* assays/endpoints that have been used for effects-based environmental monitoring, the review shall provide (1) an assessment of the degree to which the endpoint(s) reflects generic versus specific effects (including, for specific endpoints, the pathway(s) affected, e.g., chemical activation of the estrogen receptor for VTG in male fish), (2) the degree to which the assay/endpoints can be related to an adverse response at the individual or population level (see attached paper by Ankley et al. [2010] for further background on this), (3) whether the endpoint/assay would be considered an "off the shelf" measurement (e.g., validated

# Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances" in the

Contract: EP-W-09-024, Work Assignment: 1-01

system with strong scientific underpinnings, readily available through commercial, government, and/or other sources, etc.) versus a research tool that may not be ready for broad deployment or use (this point also should consider the degree of validation and standardization that has been conducted), and (4) consideration of the types of matrices to which the assay/endpoint has been successfully applied (e.g., fresh- versus salt-water; whole waters, effluents, sediments, tissues—or extracts thereof, etc.).

## **C. Strategies for Ecological Risk Assessment of "Chemicals of Emerging Concern":**

The objective of this task is to compile, summarize, and analyze strategies emanating from various organizations regarding the assessment of "Chemicals of emerging concern" (CECs), in particular, as they apply to risks to aquatic life in fresh, estuarine, and marine systems. CECs go by a variety of names including, contaminants of emerging concern, emerging contaminants of concern, trace organic contaminants, etc. Therefore some confusion can occur due to differences in terminology. For the purposes of this work, the approach shall be inclusive of all similar groupings. Often the CEC class includes: pharmaceuticals and personal care products, endocrine disrupting compounds, persistent bioaccumulative chemicals, and specific industrial chemicals classes. This task shall include peer reviewed articles as well as gray literature, such as workshop reports, internal reports and presentations, etc.

The following questions will help to guide this work, but these are not intended to limit the scope of the work.

- What strategies, workshop reports, etc. exist?
- How are CECs defined in each of these strategies?
- What are the specific elements in these strategies?
- What are the major classes of chemicals within the CEC grouping?
- What parameters are used in risk prioritization and assessment?
- What tools/information are used to prioritize risk and assess chemical risk?
- What are the similarities and differences among strategies?
- What are the implementation recommendations?
- What are the research recommendations?
- What are the major uncertainties identified?

Several national and international organizations have a history of activity in this subject area, including, but not limited to:

- International Joint Commission
- US EPA
- USGS
- USFWS
- US NOAA
- Environment Canada
- OECD
- Other international governments

In addition, several states, provinces, and interest organizations have a history of activity in this subject area, including, but not limited to:

- WERF (Jan 2010 Workshop Report on Progress in Determining Aquatic Impacts of TORCs)
- AWWA
- Southern California Coastal Water Research Project
- Environmental Council of the States

## **Task 6: Support to Lakewide Management Plans**

The Contractor shall provide technical support to EPA for development of various LaMP documents (i.e., Lake Superior LaMP and the AIS Prevention Plan), as directed by the WAM, such as LaMP Workgroup Activity Updates. The contractor shall prepare a draft and final "Updates" or

# **Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances in the**

Contract: EP-W-09-024, Work Assignment: 1-01

---

Fact Sheets, as directed. These "Updates" will be completed for distribution at LaMP Stakeholder Forum meetings or public distribution.

Upon further direction by the EPA WAM, the Contractor shall assist in the development of strategies for outreach to industry, States, Tribes, environmental groups and other non-governmental organizations, the public, and other stakeholders.

The Contractor shall assist EPA in its communication efforts as directed by EPA WAM. This shall include updating the stakeholder database so that it is easily used to reach stakeholders via e-mail, sending messages to stakeholders, gathering responses, preparing documents for public use, etc.

The Contractor shall prepare materials in support of and attend LaMP related meetings, as directed by the WAM.

## **Task 7: Support to Public and Other Meetings**

The Contractor shall prepare materials in support of and will attend Great Lakes Binational Toxics Strategy-related meetings. It is anticipated that there will be at least three general Stakeholder Forum meetings, three Integration and/or Sector/Substance workgroup meetings. The Contractor (as directed by the EPA WAM) shall prepare materials in support of and will attend PBT Reduction Strategy Team meetings/calls and the 10-year Anniversary Workshop. Support two half day sessions at SETAC in Portland. Support IAGLR Expert consultation in Duluth, 2011.

## **III. Deliverables**

The Contractor shall prepare and submit a revised work plan in accordance with contract requirements. EPA will approve the work plan in accordance with contract requirements.

The Contractor shall prepare supporting materials, meeting minutes/summaries and strategic direction for the Integration Workgroup, Stakeholder, PBT Strategy Team and other meetings. The Contractor shall also help develop and/or revise the reports as outlined above, following WAM technical direction, as indicated in Attachment A.

**A QA/QC plan is required for any data collection or analysis that will be used in documents that result in recommendations for future Agency actions.**

CBI does not apply.

This work assignment relates to pages 4-17 through 6-17 of the current Statement of Work (SOW) of the contract.

## **IV. Period of Performance**

This work assignment will start with the date of the Contracting Officer's signature and extend through June 22, 2011.

# Support for "Strategy for the Virtual Elimination of Persistent Toxics Substances in the

Contract: EP-W-09-024, Work Assignment: 1-01

---

## V. Level of Effort

The number of technical hours shall not exceed 2,230. The Contractor shall notify the EPA WAM when 75% of the allotted hours have been reached either in any one funding category or in the overall work assignment.

## VI. EPA Contacts

### Work Assignment Manager:

E. Marie Wines  
U.S. Environmental Protection Agency (G-17J)  
77 W. Jackson Boulevard  
Chicago, IL 60604  
Phone: (312) 886-6034  
Fax: (312)  
email: wines.e-marie@epa.gov



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number

1-02

☐ Original ☐ Amendment Number:

Contract Number  
EP-W-09-024

Contract Period  
☐ Base ☒ Option Period Number: 1

Title of Work Assignment  
See Comments

Contractor  
Battelle Memorial Institute

Specify Section and Paragraph of Contract SOW

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance  
From: 06/29/2010 To: 06/22/2011

Comments:

Title: Support for Chemical Hazard, Risk Management and Risk Evaluation

This action approves the technical and financial work plan dated March 16, 2011.

☐ Superfund

### Accounting and Appropriations Data

☐ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$136,961.00	998
This Action	\$ 22,878.00	174
Total	\$159,839.00	1,172

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 03/16/2011 Cost/Fee: \$159,839.00 LOE: 1,172

Cumulative Approved: 05/18/2011 Cost/Fee: \$159,839.00 LOE: 1,172

Work Assignment Manager Name  
Jeffrey Taylor

Branch/Mail Code

Phone Number (202) 564-8828

Fax Number

(Signature)

(Date)

Project Officer Name  
Cynthia Bowie

Branch/Mail Code

Phone Number (202) 564-7726

Fax Number

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Officer Name  
Christine Edwards

Branch/Mail Code

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460		Work Assignment Number 1-02								
<b>Work Assignment</b>		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000007								
Contract Number EP-W-09-024	Contract Period    06/23/2009 To    06/22/2011 Base                      Option Period Number    1	Title of Work Assignment/SF Site Name See Comments								
Contractor BATTELLE MEMORIAL INSTITUTE		Specify Section and paragraph of Contract SOW								
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From    06/29/2010 To    06/22/2011								
Comments: Title: Support for Chemical Hazard, Risk Management and Risk Evaluation This action adds 525 hours to the work assignment. A revise work plan is requested.										
<input type="checkbox"/> Superfund		Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund								
Note: To report additional accounting and appropriations data use EPA Form 1900-59A.										
SFO (Max 2) <input type="checkbox"/>										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 8)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:                      Cost/Fee: 06/23/2009 To 06/22/2011 This Action:							LOE: 1,172 525 1,697			
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated: 3/16/2011                      Cost/Fee: \$159,939							LOE: 1,172			
Cumulative Approved:							Cost/Fee:                      LOE:			
Work Assignment Manager Name    Jeffrey Taylor _____ (Signature)                                      (Date)							Branch/Mail Code: Phone Number    202-564-8828 FAX Number:			
Project Officer Name    Cynthia Bowie _____ (Signature)                                      (Date)							Branch/Mail Code: Phone Number: 202-564-7726 FAX Number:			
Other Agency Official Name _____ (Signature)                                      (Date)							Branch/Mail Code: Phone Number: FAX Number:			
Contracting Official Name    Christine Edwards _____ (Signature)                                      (Date)							Branch/Mail Code: Phone Number: 202-564-2182 FAX Number:			

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-02 <input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000006	
Contract Number EP-W-09-024		Contract Period   06/23/2009 to   06/22/2011 Base                      Option Period Number   1	
Contractor BATTELLE MEMORIAL INSTITUTE		Title of Work Assignment/SF Site Name See Comments	
Specify Section and paragraph of Contract SOW			
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From   06/29/2010 To   06/22/2011	
Comments: Technical Support for Chemical Hazard, Risk Management and Risk Evaluation This amendment adds 174 hours to the work assignment. A revised financial work plan is required.			
<input type="checkbox"/> Superfund		Accounting and Appropriations Data	
		<input checked="" type="checkbox"/> Non-Superfund	
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.			
SFO (Max 2) <input type="checkbox"/>			
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)
			Budget Org/Code (Max 7)
			Program Element (Max 9)
			Object Class (Max 4)
			Amount (Dollars)
			(Cents)
			Site/Project (Max 8)
			Cost Org/Code (Max 7)
1			
2			
3			
4			
5			
Authorized Work Assignment Ceiling			
Contract Period:		Cost/Fee:	
06/23/2009 To 06/22/2011		LOE: 998	
This Action:		174	
Total:		1,172	
Work Plan / Cost Estimate Approvals			
Contractor W/P Dated:		Cost/Fee:	
		LOE:	
Cumulative Approved:		Cost/Fee:	
		LOE:	
Work Assignment Manager Name   Jeffrey Taylor		Branch/Mail Code:	
_____		Phone Number   202-564-8828	
(Signature) _____ (Date)		FAX Number:	
Project Officer Name   Cynthia Bowie		Branch/Mail Code:	
_____		Phone Number: 202-564-7726	
(Signature) _____ (Date)		FAX Number:	
Other Agency Official Name		Branch/Mail Code:	
_____		Phone Number:	
(Signature) _____ (Date)		FAX Number:	
Contracting Official Name   Christine Edwards		Branch/Mail Code:	
_____		Phone Number: 202-564-2182	
(Signature) _____ (Date)   3/11/11		FAX Number:	

Work Assignment Form. (WebForms v1.0)

Acknowledged by (b)(4) 03-18-11

(b)(4)



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Assignment Number

1-02

☐ Original ☒ Amendment Number: 5

Contract Number  
EP-W-09-024

Contract Period

☐ Base ☒ Option Period Number: 1

Title of Work Assignment

Technical Support for Chemical  
Hazard, Risk Management and Risk  
Evaluation

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

Purpose:

- ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Assignment Approval

Periods of Performance

From: 06/29/2010 To: 06/22/2011

Comments:

This work assignment amendment approves the Technical and Financial work plan dated December 15, 2010.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$114,264.00	817
This Action	\$ 22,697.00	181
Total	\$136,961.00	998

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 12/15/2010 Cost/Fee: \$ 22,697.00 LOE: 181

Cumulative Approved: 01/21/2011 Cost/Fee: \$136,961.00 LOE: 998

Work Assignment Manager Name

Jeffrey Taylor

Branch/Mail Code

Phone Number (202) 564-8828

Fax Number

(Signature)

(Date)

Project Officer Name

Cynthia Bowie

Branch/Mail Code

Phone Number (202) 564-7726

Fax Number

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Officer Name

Christina Edwards

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-02	
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001	
Contract Number EP-W-09-024		Contract Period 06/23/2009 To 06/22/2011 Title of Work Assignment/SF Site Name WA1-02/Amd. 4	
Contractor BATTELLE MEMORIAL INSTITUTE		Base      Option Period Number 1 Specify Section and paragraph of Contract SOW	
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From 06/29/2010 To 06/22/2011	
Comments: This Work Assignment amendment approves the Technical and Financial Work Plan dated 15 December 2010, at a cost of \$22,697.00. Currently, there are 998 Professional Labor Hours allocated for this Work Assignment.			
<input type="checkbox"/> Superfund		Accounting and Appropriations Data	
		<input checked="" type="checkbox"/> Non-Superfund	
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.			
SFO (Max 2) <input type="checkbox"/>			
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)
			Budget Org/Code (Max 7)
			Program Element (Max 9)
			Object Class (Max 4)
			Amount (Dollars)
			(Cents)
			Site/Project (Max 8)
			Cost Org/Code (Max 7)
1			
2			
3			
4			
5			
Authorized Work Assignment Ceiling			
Contract Period:		Cost/Fee:	
06/23/2009 To 06/22/2011		LOE: 817	
This Action:		181	
Total:		998	
Work Plan / Cost Estimate Approvals			
Contractor WP Dated:		Cost/Fee:	
		LOE:	
Cumulative Approved:		Cost/Fee:	
		LOE:	
Work Assignment Manager Name    Jeffrey Taylor		Branch/Mail Code:	
_____		Phone Number 202-564-8828	
(Signature) _____		FAX Number:	
(Date) _____			
Project Officer Name    Cynthia Bowie		Branch/Mail Code:	
_____		Phone Number: 202-564-7726	
(Signature) _____		FAX Number:	
(Date) _____			
Other Agency Official Name		Branch/Mail Code:	
_____		Phone Number:	
(Signature) _____		FAX Number:	
(Date) _____			
Contracting Official Name    Christine Edwards		Branch/Mail Code:	
_____		Phone Number: 202-564-2182	
(Signature) _____		FAX Number:	
(Date) _____			

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-02

## Work Assignment

☐ Original ☒ Amendment Number: 4Contract Number  
EP-W-09-024Contract Period  
Base Option Period NumberTitle of Work Assignment  
"Technical Support to Chemical Hazard and  
Risk Evaluation and Risk Management"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
See the attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan ApprovalPeriods of Performance  
From: 06/29/10 To: 06/22/11

Comments:

This amendment increases the LOE by 165 PLHs. There are no other changes to the  
Statement of Work. A Financial Work Plan is required.☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 8)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$114,264.00	817
This Action	\$0.00	165
Total	\$114,264.00	982

## Work Plan / Cost Estimate Approvals

Contractor WP Dated : Cost/Fee: LOE: 165

Cumulative Approved: Cost/Fee: \$114,264.00 LOE: 982

Work Assignment Manager Name

JEFFREY A. TAYLOR

(Signature)

(Date)

Branch/Mail Code 7405M

Phone Number (202) 564-8828

Fax Number (202) 564-4775

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"**

Contract: EP-W-09-024, Work Assignment: 1-02, Amendment: 0004

---

## **Summary Information**

Title: "Technical Support to Chemical Hazard and Risk  
Evaluation and Risk Management"  
Period of Performance: From: 06/29/10  
To: 06/22/11  
Award Date: 06/29/10  
Total Funding:

## **WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 817 to 982.

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

-02

## Work Assignment

☐ Original ☒ Amendment Number: 3Contract Number  
EP-W-09-024

Contract Period

Base

Option Period Number

Title of Work Assignment

"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

See the attached Statement of Work

Purpose:

☐ Work Assignment Initiation☐ Work Assignment Close-Out☒ Work Assignment Amendment☐ Incremental Funding☒ Work Plan Approval

Periods of Performance

From: 06/29/10

To: 06/22/11

Comments:

This amendment approves the Technical and Financial Work Plan dated 11 November 2010, at a cost of \$4,585.00. Currently, there are 817 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee

LOE

Previously Approved

\$109,679.00

810

This Action

\$4,585.00

7

Total

\$114,264.00

817

## Work Plan / Cost Estimate Approvals

Contractor WP Dated: 11/11/10

Cost/Fee: \$4,585.00

LOE: 7

Cumulative Approved:

Cost/Fee: \$114,264.00

LOE: 817

Work Assignment Manager Name

JEFFREY A. TAYLOR

(Signature)

(Date)

Branch/Mail Code 7405M

Phone Number (202) 564-8828

Fax Number (202) 564-4775

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# "Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"

Contract: EP-W-09-024, Work Assignment: 1-02, Amendment: 0003

## Summary Information

Title: "Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"  
Period of Performance: From: 06/29/10 To: 06/22/11  
Award Date: 06/29/10  
Total Funding:

## WA Totals

The following item(s) have been modified:

Category	POP	From	By	To
Estimated Cost	Option 1	(b)(4)		
Fixed Fee	Option 1			

## WA Classification

The following changes have occurred:

The Labor Hour Ceiling has changed from 810 to 817.



## Work Assignment

☐ Original ☒ Amendment Number: 1Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Technical Support to Chemical Hazard and  
Risk Evaluation and Risk Management"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
See the attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance

From: 06/29/10

To: 06/22/11

## Comments:

This amendment approves the Technical and Financial Work Plan dated 09 July 2010, in the amount of \$109,679.00. Currently, there are 780 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	725
This Action	\$109,679.00	55
Total	\$109,679.00	780

## Work Plan / Cost Estimate Approvals

Contractor WP Dated: Cost/Fee: \$109,679.00 LOE: 55

Cumulative Approved: 07/29/10 Cost/Fee: \$109,679.00 LOE: 780

Work Assignment Manager Name

JEFFREY A. TAYLOR

Branch/Mail Code 7405M

Phone Number (202) 564-8828

Fax Number (202) 564-4775

(Signature)

(Date)

Project Officer Name

SINETA WOOTEN

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

CHRISTINE EDWARDS

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"**

Contract: EP-W-09-024, Work Assignment: 1-02, Amendment: 0001

## **Summary Information**

Title: "Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"  
Period of Performance: From: 06/29/10  
To: 06/22/11  
Award Date: 06/29/10  
Total Funding:

## **WA Totals**

*The following item(s) have been added:*

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	

## **WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 725 to 780.

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-02

## Work Assignment

☒ Original ☐ Amendment Number:Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Technical Support to Chemical Hazard and  
Risk Evaluation and Risk Management"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
See the attached Statement of WorkPurpose: ☒ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 06/25/10

To: 06/22/11

Comments:

Work Assignment Initiation

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:  
Previously Approved

Cost/Fee

LOE

This Action

Total \$0.00

725

## Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee: \$0.00

LOE: 725

Work Assignment Manager Name

Branch/Mail Code 7405M

JEFFREY A. TAYLOR

Phone Number (202) 564-8828

(Signature)

(Date)

Fax Number (202) 564-4775

Project Officer Name

Branch/Mail Code 7404T

SINETA WOOTEN

Phone Number (202) 566-0501

(Signature)

(Date)

Fax Number (202) 566-0469

Other Agency Official Name

Branch/Mail Code

Phone Number

(Signature)

(Date)

Fax Number

Contracting Official Name

Branch/Mail Code 3803R

CHRISTINE EDWARDS

Phone Number (202) 564-2182

(Signature)

(Date)

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# "Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"

Contract: EP-W-09-024, Work Assignment: 1-02

---

## Summary Information

Title: "Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"  
Period of Performance: From: 06/25/10  
To: 06/22/11  
Award Date:  
Total Funding:

## Procurement Management Roles

### WORK ASSIGNMENT MANAGER:

U.S. E.P.A.  
Attn: JEFFREY A. TAYLOR  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460  
  
Mail Code: 7405M  
Phone Number: (202) 564-8828  
Fax Number: (202) 564-4775  
E-Mail Address: taylor.jeffrey@epa.gov

### ALTERNATE WORK ASSIGNMENT MANAGER:

U.S. E.P.A.  
Attn: KAREN S. HOFFMAN  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460  
  
Mail Code: 7405M  
Phone Number: (202) 564-8158  
Fax Number: (202) 564-4775  
E-Mail Address: hoffman.karen@epa.gov

### ALTERNATE WORK ASSIGNMENT MANAGER:

U.S. E.P.A.  
Attn: ANNETTE E. WASHINGTON  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460  
  
Mail Code: 7405M  
Phone Number: (202) 564-8178  
Fax Number: (202) 564-4775  
E-Mail Address: washington.annette@epa.gov

## Attachments

### Attachment Name

-----  
"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"

# **"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"**

Contract: EP-W-09-024, Work Assignment: 1-02

---

**Contract Number: EPW09024**

**Work Assignment Number: 1-02**

## **Title: Technical Support to Chemical Hazard and Risk Evaluation and Risk Management**

This work assignment continues and expands upon the work initiated under Work Assignment 0-02 of Contract EP-W-09-024. No work performed under previous work assignments will be duplicated under this work assignment.

### **I. Background:**

This work assignment, entitled *Technical Support to Chemical Hazard and Risk Evaluation and Risk Management*, was developed to provide EPA with support in analyzing existing chemicals and pursuing follow-up work for those chemicals that have the highest hazard and risk.

EPA's Existing Chemicals Program addresses pollution prevention, risk assessment, hazard and exposure assessment and characterization, and risk management for chemical substances in commercial use. Much of the program's work focuses on High Production Volume (HPV) chemicals and Moderate Production Volume chemicals. HPV chemicals are produced/imported in the United States at volumes greater than or equal to one million pounds per year; and MPV chemicals are produced/imported in the United States at volumes of greater than or equal to 25,000 pounds and less than one million pounds per year. EPA used the production/import volumes from the 2006 Inventory Update Reporting (IUR) to identify approximately 6,750 HPV and MPV chemicals. The Agency can draw upon existing data sources to evaluate many of the 6,750 chemicals. Launched in 1998, EPA's HPV Challenge Program resulted in a great deal of chemical manufacturer-supplied hazard data posted to EPA's website that can now be used to evaluate hazard and risk. The Agency will use this hazard data, along with exposure data collected from IUR, to evaluate chemicals according to whether additional regulatory or voluntary action is appropriate. For the chemicals that EPA identifies as high hazard and risk, EPA will choose from among many actions that it is authorized to take under the current Toxic Substances Control Act. The Agency may pursue such regulatory actions as restricting chemical use through banning its manufacture/import, issuing Significant New Use Rules that require manufacturers/importers to alert EPA of any new uses, and publishing test rules that require the chemical industry to supply EPA with additional data. Among other options, the Agency will also analyze safer substitute chemicals and consider voluntary phase-outs from the chemical manufacturers.

### **II. Scope of Work:**

#### **Subtask 1. Work Plan and Task Management**

The contractor shall prepare and submit a technical and financial work plan in accordance with the requirements of this contract. Work under this subtask shall include participating in conference calls, preparing the monthly progress reports, and other task management.

#### **Subtask 2. Hazard and Risk Evaluation**

The contractor shall assist EPA with its Action Plan hazard and risk evaluation. It will be necessary to prioritize chemicals for EPA review by analyzing overlaps amongst international and state lists of chemicals. The contractor will help EPA take follow-up action on chemicals that generally have the most hazard and risk concerns. The contractor may also help EPA conduct research on the chemicals – i.e., regulatory reviews – in order to develop a clear understanding of whether or how the chemicals have already been regulated.

EPA may ask the contractor to develop a tracking system in an effort to keep accurate records of the actions that EPA takes on chemicals.

The contractor shall provide support at interdivision meetings where chemicals are evaluated and

# **"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"**

Contract: EP-W-09-024, Work Assignment: 1-02

---

risk management decisions are developed. The meetings may occur approximately once every several weeks and last approximately one-to-two hours in duration, and require notetaking and voice recording so that EPA has a record of the communications. The contractor may also provide logistical support, facilitation, and notetaking for other Existing Chemicals meetings.

EPA may need assistance with special analyses that relate to hazard and risk evaluation. The HPV Challenge Program data collection and communication process has nearly reached a conclusion, but EPA may ask Battelle to help it process sponsor organization's communications and analyze data collected through the HPV Challenge Program.

EPA may ask the contractor for other work related to hazard and risk evaluation, and Action Plan development.

## **Subtask 3. Inventory Update Reporting (IUR)**

The contractor shall be responsible for providing EPA with statistics in terms of production volume, companies, industrial processing and use, consumer and commercial use, and other 2006 IUR information that has been collected by EPA. As the 2006 IUR is updated, EPA anticipates providing Battelle on a regular basis with a confidential business information (CBI) IUR database in order for queries to be conducted on the IUR information.

EPA may ask the contractor to continue to track IUR rule comments from the public. The Agency may also ask the contractor to create IUR training materials that will be posted to the IUR website, such as web tutorials and presentations. Other website support may also be necessary, as well as other work generally related to the IUR.

## **III. Deliverables:**

Subtask 1.	The contractor shall prepare and submit the work plan in accordance with contract requirements.	
Subtask 2.	Hazard and Risk Analyses. Hazard and Risk Tracking. Hazard and Risk Meeting Support.	At WAM's Request. At WAM's Request. Approximately once every three weeks.
Subtask 3.	2006 IUR Analyses. IUR Rule Comment Tracking and Training Support.	At WAM's Request. At WAM's Request.

- EPA will approve the work plan within 45 days.
- A QA plan is not required.
- A work plan is required.
- CBI does apply.
- The work assignment relates to: Task II, Subtask 1; Task III, Subtasks 1, 8, and 13; and Task IV, Subtask 3 of the SOW.

## **IV. Period of Performance:**

This Work Assignment will start with the date of the Contracting Officer's signature and extend through June 22, 2011.

## **V. Level of Effort:**

The level of effort described in this work assignment shall not exceed 725 professional hours.

# **"Technical Support to Chemical Hazard and Risk Evaluation and Risk Management"**

Contract: EP-W-09-024, Work Assignment: 1-02

---

## **VI. EPA Contacts:**

### **Work Assignment Manager**

Jeffrey Taylor  
EPA East Building, Rm 4410H, MC 7405M  
1200 Penn. Ave, NW, Washington, DC 20460  
Phone: (202) 564-8828  
FAX: (202) 564-4775

### **Deputy Work Assignment Manager**

Karen Hoffman  
EPA East Building, Rm 4410E, MC 7405M  
1200 Penn. Ave, NW, Washington, DC 20460  
Phone: (202) 564-8158  
FAX: (202) 564-4775

### **Deputy Work Assignment Manager**

Annette Washington  
EPA East Building, Rm 4351A, MC 7405M  
1200 Penn. Ave, NW, Washington, DC 20460  
Phone: (202) 564-8178  
FAX: (202) 564-4775



United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

## Work Assignment

☐ Original ☒ Amendment Number: 1

Contract Number  
EP-W-09-024

Contract Period  
Base Option Period Number

Title of Work Assignment  
"Technical Support for the Enhancement  
and Debugging of SuperMUSE V1, 3MRA  
V1/V2, and FRAMES V2 Software"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
See the attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance  
From: 06/25/10 To: 06/22/11

### Comments:

This amendment approves the Technical and Financial Work Plan dated 09 July 2010, capping the cost at \$122,000.00. Currently, there are 858 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	972
This Action	\$122,000.00	(114)
Total	\$122,000.00	858

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 07/09/10 Cost/Fee: \$126,086.00 LOE: 114  
Cumulative Approved: Cost/Fee: \$122,000.00 LOE: 858

Work Assignment Manager Name

Branch/Mail Code

JUSTIN E. BABENDREIER

Phone Number (706) 355-8344

(Signature)

(Date)

Fax Number (706) 355-8302

Project Officer Name

Branch/Mail Code 7404T

SINETA WOOTEN

Phone Number (202) 566-0501

(Signature)

(Date)

Fax Number (202) 566-0469

Other Agency Official Name

Branch/Mail Code

Phone Number

(Signature)

(Date)

Fax Number

Contracting Official Name

Branch/Mail Code 3803R

CHRISTINE EDWARDS

Phone Number (202) 564-2182

(Signature)

(Date)

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

• "Technical Support for the Enhancement and Debugging of SuperMUSE V1,  
3MRA V1/V2, and FRAMES V2 Software"

Contract: EP-W-09-024, Work Assignment: 1-03, Amendment: 0001

**Summary Information**

Title: "Technical Support for the Enhancement and  
Debugging of SuperMUSE V1, 3MRA V1/V2, and FRAMES  
V2 Software"  
Period of Performance: From: 06/25/10  
To: 06/22/11  
Award Date: 06/25/10  
Total Funding:

**WA Totals**

*The following item(s) have been added:*

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	

**WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 972 to 858.

United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number

1-0

☒ Original ☐ Amendment Number:

Title of Work Assignment

"Technical Support for the Enhancement  
and Debugging of SuperMUSE V1, 3MRA  
V1/V2, and FRAMES V2 Software"Contract Number  
EP-W-09-024

Contract Period

Base

Option Period Number

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

See the attached Statement of Work

Purpose:

☒ Work Assignment Initiation ☐ Work Assignment Close-Out☐ Work Assignment Amendment ☐ Incremental Funding☐ Work Plan Approval

Periods of Performance

From: 06/25/10

To: 06/22/11

Comments:

Work Assignment Initiation

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 6)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee

LOE

Previously Approved

This Action

Total

\$0.00

972

## Work Plan / Cost Estimate Approvals

Contractor WP Dated :

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee: \$0.00

LOE: 972

Work Assignment Manager Name

JUSTIN E. BABENDREIER

(Signature)

(Date)

Branch/Mail Code

Phone Number (706) 355-8344

Fax Number (706) 355-8302

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and FRAMES V2 Software"**

Contract: EP-W-09-024, Work Assignment: 1-03

---

## **Summary Information**

Title: "Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and FRAMES V2 Software"

Period of Performance: From: 06/25/10  
To: 06/22/11

Award Date:

Total Funding:

## **Procurement Management Roles**

### **WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: JUSTIN E. BABENDREIER  
COLLEGE STATION RD  
ATHENS, GA 30613

Mail Code:  
Phone Number: (706) 355-8344  
Fax Number: (706) 355-8302  
E-Mail Address: babendreier.justin@epa.gov

## **Attachments**

### **Attachment Name**

-----  
"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and FRAMES V2 Software"

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

## **Scope of Work WA 1-03; OPPT Contract EP-W-09-024**

### **Title:**

Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and FRAMES V2 Software Systems

### **Research Program for Sensitivity and Uncertainty Analyses**

EPA/ORD/NERL/ERD's research program for investigating sensitivity and uncertainty analyses for various environmental models currently utilizes a series of 400 PCs linked together in a local area network. This bank of PCs, a functional equivalent to a supercomputer, allows for computationally intensive modeling experiments to be conducted. The methodology focuses on computing many simulations of a single model or modeling system application. The cluster is referred to as SuperMUSE – Supercomputer for Model Uncertainty and Sensitivity Evaluation.

The PC cluster and associated management software currently support 32-bit Windows-based operating system environs, and are capable of supporting Linux-based operating systems. To fully utilize this network of PCs, a variety of software tools have been developed using a standard database structure based on contemporary open-source MySQL. Many of the tools are model-independent, where example model dependent prototypes have also initially been developed for simulation of Version 1.x of the FRAMES 3MRA modeling technology.

This statement of work covers maintenance and enhancement of FRAMESv2, SuperMUSE 1.0 and 3MRA 1.x/2.x tools, and support in software development for additional tools for uncertainty and sensitivity assessment.

### **Background**

The Framework for Risk Analysis in Multimedia Environmental Systems (FRAMES) - Multimedia, Multipathway, Multireceptor Risk Analysis (3MRA) software system is an integrated multimedia modeling system for assessing exposure and risks from the release of hazardous materials placed into a variety of land-based waste management units. The FRAMES 3MRA Version 1.0 (FRAMES 3MRA 1.0) software system was constructed to perform risk analyses for the U.S. Environmental Protection Agency (EPA) Office of Solid Waste to help establish constituent-specific "exit" (e.g., safe disposal) levels for low risk solid wastes. In the design of FRAMES 3MRA, the component-based approach provides for 1) standardized tools and techniques that are typically used in the assessment process, and 2) capabilities for new functionality to be added.

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

The FRAMES 3MRA 1.0 was originally designed to run on a single PC computer system. It was found that parallel execution across a number of machines would be valuable, helping to expedite simulation experiments needed for large, national-scale studies and various uncertainty and sensitivity analysis studies. The FRAMES 3MRA 1.x version of the software was designed and built to allow for, among other capabilities, parallel execution of the FRAMES 3MRA 1.0 modeling system across multiple machines. FRAMES 3MRA Version 2.0 software components, covered under this scope as well, represents a further, significantly enhanced software technology that replaces the system user interface with a more generic user interface concept.

To successfully control and implement the FRAMES 3MRA 1.x system so multiple (e.g., millions) runs can be simultaneously executed and tracked on the 400+ machines, a number of software tools have and are being developed to help manage the operation of the system, as well track files, warnings, and errors. Because the vocabulary can be daunting at times, a number of key components are defined as follows:

- **Aggregated Exit Level Processor II Visualization (AggELP2Vis)**—The AggELP2Vis is a program that performs many of the same operations as the AggELP2MySQL, but instead renders a hypertext markup language (HTML) document that shows all the scenarios in a single context. The original ELP2/RVP allows a user to see one chart at a time, whereas the AggELP2Vis allows the user to see all scenarios and impacts on populations, cohorts, distances, exposures, and receptors that are not specifically protected. A GNUPlot is used to generate the charts.

- **Aggregated Exit Level Processor I for MySQL (AggELP1MySQL)**—The AggELP1MySQL is a program logically identical to the original ELP1 with the simple change that the information is stored in a My Structured Query Language (MySQL) database instead of MS-Access. The resulting file is used as input to the AggELP2MySQL and the AggClientCollect.

- **Aggregated Exit Level Processor II for MySQL (AggELP2MySQL)**—The AggELP2MySQL is a program logically identical to the original ELP2/RVP that reads its inputs from the MySQL database. The results are tables stored in MySQL that are equivalent to the original Protective Summary Output Files. Setting the scenarios in this tool facilitates the AggELP2Vis in displaying all the scenarios simultaneously.

- **Andres Iterated Fractional Factorial Design Dynamic Link Library (AIFDDLL)**—The AIFDDLL is the Enhanced Computational Optimization Sensitivity Uncertainty (ECOSU) compliant implementation of a grouping and input changing strategy that seeks to determine which variables in a large number of variables change the output the most. It is a screening method for finding the most sensitive parameters. The AIFDDLL is delivered as a set of subroutines and functions that are part of a dynamic library.

- **Batch Tasker**—This is a Model Tasker similar to the Command Tasker but without the restriction of executing commands on specific machines. The Batch Tasker consumes

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

a text file where each line is a command. Each command is invoked in order on the next available machine.

- **Central Processing Unit Allocator (CPU Allocator or CPUa)**—The CPUa is responsible for making sure available machines are assigned to a Model Tasker running on some machine in the cluster. Every machine is a slave to a specific CPUa, as there can be multiple CPUa's. The Model Tasker, CPUa, and Tasker Client continuously communicate with each other.

- **Client Collector for Aggregated Exit Level Processor I (CCAggELP1)**—The CCAggELP1 is an application that reads two instances of the output of the AggELP1 and merges them into a single instance. This is used to collect the output of ELP1 in pairs across the cluster of machines. The CCAggELP1 is intended to collect simulation results from another single machine. A collection across a large number of machines can then be done by simply using CCAggELP1 to collect the results in pairs and then collect those results into pairs again, and so on until all the results are accumulated on a single machine. The client collect tool takes the results that are produced on each individual client and compiles them into a single database.

- **Command Tasker**—The Command Tasker is a specialized Tasker that is essentially a server-end batch file manager. The Command Tasker executes commands on specific machines in a specific order. It provides machine-specific commands, based on a set of prerequisite tasks and takes a series of commands, but confirms that specified previous commands have already been executed, thereby accounting for dependent commands (e.g., delete files in a certain order). Similar to the capabilities of the Update Client tool, and actually representing a Model Tasker, this tool delivers binary tree task dependencies in a collection of common aggregated data/files, or reversibly, in distribution of common data/files. The Command Tasker acts as a Model Tasker in managing activities across the cluster, allowing the user to issue commands to clients (e.g., DOS commands for Windows or shell scripts for Linux) that are executed by the Tasker Client. Extensively generic in form, it is currently used for conducting log-scale database collections for 3MRA experiments and for more quickly executing file-management tasks that take individual PCs substantial time to complete.

- **Delegating Dynamic Link Library (DDLL)**—This library is a single entry point for any ECOSU compliment DLL to provide sampling algorithms. For example, if Monte Carlo is chosen as a sampling approach, the DLL is responsible for redirecting all calls to sampling algorithms and all results to the actual Monte Carlo functionality.

- **Enhanced System User Interface (ESUI)**—The ESUI provides the user with an enhanced ability to pick and choose specific input combinations of chemical name, site ID, realization, and concentration of waste (Cw), so only that specific run or set of runs are executed and where one does not have to look through a large number of simulation sets to get to the specific run. All information is stored in the 3MRA header file [hd.ssf].

- **Enhanced 3MRA Chemical Properties Processor**—This is a logically identical

## **"Technical Support for the Enhancement and Debugging SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

chemical property processor that reads its input data from the cp.ssf file instead of reading the ASCII data file originally stored in the CPData directory. The site definition processor (SDP) will read the cp parameters as any other component; it will then call the enhanced CPPDLL. The CPPDLL is responsible for populating all the original values in the cp.ssf datafile from the data provided in the cp.ssf from the SDP.

- **Enhanced 3MRA SUI Deterministic Switch**—This is an addition to the Enhanced System User Interface (ESUI) that allows the user to choose the sampling technique and whether full sampling is accomplished or just a deterministic run. Under FY05 development, the ESUI will be able to run the DSP and allow the user to change the sampling algorithms as well.

- **Enhanced 3MRA SDP Deterministic Switch**—This switch is an addition to the SDP that allows the use of central tendency instead of actually sampling the value from the distribution. The changing value of the sampling technique is passed onto the Delegating Dynamic Link Library via this SDP enhancement.

- **FRAMES-2.0**—The Framework for Risk Analysis in Multimedia Environmental Systems- Version 2.0 (FRAMES-2.0) is a system that allows legacy disparate models and databases to communicate in a plug and play atmosphere. It combines many of the best features of FRAMES version 1 (e.g., Framework User Interface) and FRAMES 3MRA 1.0 (e.g., Application Programming Interface).

- **FRAMES 3MRA**—The Framework for Risk Analysis in Multimedia Environmental Systems (FRAMES)-Multimedia, Multipathway, Multireceptor Risk Analysis (3MRA) software system is an integrated multimedia modeling system for assessing exposure and risks from the release of hazardous materials placed into a variety of land-based waste management units.

- **FRAMES 3MRA 1.0**—The FRAMES 3MRA Version 1.0 software system was constructed to perform risk analyses for the EPA Office of Solid Waste to help establish constituent-specific "exit" (e.g., safe disposal) levels for low risk solid wastes. In the design of FRAMES 3MRA, the component-based approach provides for 1) standardized tools and techniques that are typically used in the assessment process, and 2) capabilities for new functionality to be added. The FRAMES 3MRA 1.0 was originally designed to run on a single PC computer system.

- **FRAMES 3MRA 1.x**—The FRAMES 3MRA 1.x version of the software was designed and built to allow for, among other capabilities, parallel execution of the 3MRA 1.0 modeling system across multiple machines. It was found that parallel execution across a number of machines would be valuable, helping to expedite simulation experiments needed for large, national-scale studies and various uncertainty and sensitivity analysis studies.

- **FRAMES 3MRA 2.0**—The FRAMES 3MRA Version 2.0 represents a further, significantly enhanced version of the FRAMES 3MRA 1.x software technology by

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

replacing the system user interface with a more generic user interface concept.

- **Framework User Interface Tasker (FUITasker)**—The FUITasker modifies module inputs and either wraps the entire file set and sends it to the Tasker Client for further processing or performs the required processing locally. The FUITasker is a single looping capability for Framework for Analysis of Risk in Multimedia Environmental Systems (FRAMES) 2.0 that allows the user to change the value of any single parameter. The looping can be executed on a single computer (called serial mode) or on the cluster (called parallel mode).

- **Latin Hypercube Dynamic Link Library (LHSDLL)**—The LHSDLL is the ECOSU compliant implementation of the Latin Hypercube sampling algorithm. The LHSDLL is delivered as a set of subroutines and functions that are part of a dynamic library.

- **Model Tasker**—The Model Tasker is a type of a component that provides a listing of things to do and resides on some machine in the cluster. There are many examples of this type of component: the Batch Tasker, Command Tasker, SUI Tasker, and FUITasker are actual examples in use. The Model Tasker, CPUa, and Tasker Client continuously communicate with each other.

- **Morris One-at-a-Time Dynamic Link Library (MOATDLL)**—The MOATDLL is the ECOSU compliant implementation of a one at a time input changing strategy associated with Morris. The MOATDLL is delivered as a set of subroutines and functions that are part of a dynamic library.

- **Process Error Program (PEP)**—The PEP is program that is designed to read the errors and warning files produced by FRAMES 3MRA hwirio.dll and store them in a central MySQL database. The PEP is used to keep track of which components in the simulation have succeeded or failed. It provides the user with the ability to capture error and warning messages and store them in the same location as the Site Summary Tool (SST). It works on the assumption that when any component of the system software fails, an error or warning file is produced in the grf directory. The PEP simply copies the Warning or Error file from the grf directory to the MySQL database that is referenced in its command line and, therefore, has no user interface.

- **Refactored Monte Carlo Dynamic Link Library (RMCDLL)**—The RMCDLL is the ECOSU compliant implementation of Monte Carlo sampling. The RMCDLL is delivered as a set of subroutines and functions that are part of a dynamic library.

- **Site Summary Tool User Interface (SSTUI)**—The SSTUI allows the user to pick-and-choose output from a set of 3MRA model input and output files (site simulation file [SSF] and global results file [GRF] files) via the SST. For example, it will allow you to define how to extract information for a variable for a specific chemical and location but averaged for all times. It allows one to statistically roll-up outputs.

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

● **Site Visualization**—This is a program that displays a plot of all results that have time as a dependent variable. It starts at the source and ends at human and ecological exposure. This application uses GNUPlot to generate charts while the application itself creates an HTML document that has the charts organized in a logical manner.

● **Site Summary Tool (SST)**—The SST is a program that allows the user to extract, summarize, and store modeling results in a database. The SST requires the user to create an instruction \*.csv script file that describes what information to consume (i.e., extract) from model inputs and outputs for a single FRAMES 3MRA 1.x simulation. The SST extracts information from the SSF and GRF files, given a text file that describes the variable to be extracted and how to summarize those data. The results of the extract and summary are stored in a MySQL database.

● **System User Interface Tasker (SUITasker)**—The SUITasker reads a header file and buffers up compute jobs so no machines are waiting to execute a job. It passes RunAll.bat and then launches Run.bat, which is on all machines.

● **Tasker Client**—The Tasker Client is the workhorse of the parallel software system. It is a generalized batch file execution tool that uses transmission control protocol/Internet protocol (TCP/IP) to get the information about 1) the job it should contribute to and 2) the specific task it needs to perform. The task is communicated in a single Unicode Transformation Format (UTF) string that contains the batch file and a number of additional text files. It runs the actual jobs and is a slave to the CPUa and then to a Model Tasker to complete a computational task. When the Tasker Client has nothing to compute, it goes and finds something to compute from the CPUa. The Model Tasker, CPUa, and Tasker Client continuously communicate with each other.

● **Tasker**—In the parallel software system, a Tasker is any program that generates tasks that need to be performed and registers itself with the CPU Allocator. It is implemented as a TCP/IP server that waits for client machines to be directed to the Tasker by the CPU Allocator.

● **Update Client**—The Update Client 1) prepares the machines for use in the cluster, 2) copies new executables to all machines in the cluster, 3) reads list of computers, and 4) picks computers. Additional features include creating an input file for the command tasker that can collect, distribute, or invoke a command in parallel across the cluster. The Update Client tool facilitates the execution of Operating System (OS) level commands (e.g., DOS/Linux commands, batch/script files) on a large number of machines that comprise a cluster. There are two modes of operation: serial or parallel. The tool can be used, for example, to copy a single file to multiple machines, in serial or in parallel, using a binary tree scheme. In serial mode, it can also be used to perform a variety of file management tasks, such as deletion or alteration of file attributes across a network. The enhanced parallel-mode version can replace an additional set of variables with information from a partner machine.

● **FRAMES V2**— Not specifically listed and described by constituent item here,

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

various tools, processors, models and datasets comprise V2 and form the initial starting basis for work described under this, where many of these components have analogies to those described above for 3MRA V1/V2.

## **Tasks:**

The following tasks list the specific work required.

### **Task 1: Workplan Development and Project Management**

The objective of this task is to document a detailed workplan in response to the Work Assignment Scope of Work. The contractor shall document a technical plan and cost summary for conducting the assigned work. Upon approval from the EPA Work Assignment Manager the contractor shall initiate efforts.

#### **Deliverables and Schedule:**

1. Detailed workplan describing the technical approach to achieving the objectives of the work assignment.

Due date: 10 days after receipt of authorization to begin work. Within 30 days of delivery the EPA will document a response to the workplan.

2. Monthly reports: The contractor shall provide monthly reports describing technical progress and related resource status.

Due date: The contractor shall provide a monthly report on or before the 10<sup>th</sup> of each month during execution of the work assignment.

### **Task 2: Maintenance and Enhancement of SuperMUSE V1, FRAMES V2, and 3MRA V1/V2 Software Systems**

The objective of this task is to provide software maintenance and enhancement support for the SuperMUSE 1.0, FRAMES V2 and 3MRA V1/2 software systems.

#### ***General Tasking to be Performed***

Software maintenance tasking to be performed by the contractor will include:

- Telephone or email communications with the WAM or the WAM's technical support staff.
- Troubleshooting and resolution of bugs identified by EPA, and those bugs that arise out of testing and evaluation performed by the contractor,
- Development and/or revision of spreadsheet-based test plans, and

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

- Execution of test plans.

Software enhancement tasking to be performed by the contractor will include:

- Telephone or email communications with the WAM or the WAM's technical support staff.
- Modification of existing software to address new requirements specified by EPA,
- Troubleshooting and resolution of bugs identified by EPA during subsequent testing, and those bugs that arise out of testing and evaluation performed by the contractor,
- Development and/or revision of spreadsheet-based test plans, and
- Execution of test plans.

Software documentation and test plans, currently located on USDA's COLAB Development Environment (<https://colab.sc.egov.usda.gov/cb/workspace.do>; 3MRA FRAMES V2 Project Area) will be the basis for evaluation of existing software requirements and functionality. Additional software requirements associated with component enhancements will be specified by EPA through Technical Directives associated with this statement of work.

Development, modification and/or enhancement of existing documentation (i.e., the formal documents which include sections on descriptions, requirements, design, and specifications) will be the responsibility of EPA.

In addition to revision, execution, and documentation of test plans, the contractor will also be responsible for providing brief summary descriptions (using notation and/or file management features of COLAB) on changes to design and specifications sections as may be needed to maintain and/or enhance software (e.g., brief statements indicating information that may need addition/modification, dictionary and/or database table structure definitions that may need addition/modification, etc).

## ***Specific Technical Directives***

The Agency will provide a written description of each request for work to be completed on specific software components, and the required schedule. These requests will be referred to as Technical Directives and will generally indicate: a) the software component(s) to be tested, de-bugged and/or enhanced, b) initial formulations of any new or modified software requirements, and c) a not-to-exceed number of hours of Senior Software Engineer (e.g., software development) time and Software Engineer (i.e. software testing) time that may be expended by the contractor on the given request. EPA will be responsible for posting an initial set of bugs to COLAB. New requirements desired by the Agency will each be posted to COLAB as a bug, with an indicator that the bug is associated with a new requirement.

It is anticipated that several components may be associated with a given request,

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

where work on individual components may or may not be directly related. It is also anticipated that more than one technical directive may need to be active at a given time to address new issues that may arise in bringing closure to an existing request.

Because a given bug cannot always be immediately associated with a given component, it is anticipated some components will be specified in the request that ultimately do not need modification.

While fulfilling a given Technical Directive, in the event an additional component(s) is identified by the contractor as needing enhancement or modification to achieve the original request, the contractor shall: a) post associated bugs on COLAB; and b) notify the WAM. As determined by the WAM, a new or modified request will be issued to handle associated software enhancements or modifications of the newly identified component.

The contractor may evaluate any existing SuperMUSE 1.0, FRAMESv2, and 3MRA V1/2 software codes for any component at anytime as needed to execute a given request (including execution of informal software testing by the developer), but shall not post enhanced or modified codes to COLAB, or conduct formal testing of any component, unless that component has been identified in a specific request.

## ***Contractor Response to Specific Technical Directives***

Prior to initiation of actual bug resolution or enhancement through software development efforts, the contractor will first:

- Review the request,
- As needed review associated codes for components specified in the request, and
- Consult the WAM via telephone to discuss technical content of the request (e.g., to review and modify if necessary newly stated requirements, to discuss current software behaviors needing resolution, and to discuss initial technical approach to be taken to achieve software enhancement or modification).

For each request the contractor shall then execute the required enhancement/modification/testing, and deliver the resulting source code, software, test plans, and summary notations on design and specifications to the Agency via the COLAB development environment.

During execution of the WA, the contractor shall:

- Attempt to hold phone discussions with the WAM approximately biweekly to discuss technical progress on all active requests.
- Notify the EPA WAM via direct email or other automated COLAB email-based communication when a successfully executed test plan (less Agency approval) for a given component has been posted to COLAB.

In closing out a given request, the contractor shall provide a Summary Technical

# **"Technical Support for the Enhancement and Debugging SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

Progress Report in email form to the WAM if one or more components were not completed due to lack of funds. In this case, the contractor shall briefly summarize (e.g., in simple table format) which deliverables were not completed for each component.

## ***Processing and Documentation of Software Bugs***

For each component, until successfully executed test plan (with Agency approval) status has been reached, it is anticipated that the Agency and the contractor may post new bugs that are identified during review and testing associated with a given request. All detailed notations on specific bugs to be resolved and bug resolution will be conducted via COLAB by both EPA and the contractor. Any new bug identified by the contractor during execution of this WA, which substantially changes existing specifications and design shall be posted to COLAB and appropriate notations provided (i.e., the Agency requires that all substantial changes made to the software are documented through COLAB bugs and COLAB notations for component design and specifications). Any bug identified but not resolved by the contractor during execution of this WA, which substantially affects attainment of the component's stated software requirements, shall also be posted to COLAB (i.e., the Agency requires that all known remaining software deficiencies identified by the contractor during testing be documented in COLAB). Minor bugs that are resolved during evaluation, modification, enhancement or testing that do not substantially affect existing design and specifications documentation need not to be notated in COLAB.

## ***Total Task Level of Effort***

For purposes of estimating resources for this task the contractor shall assume an overall level of effort of approximately 598 hours total of software development, software testing, and project management which will be split across the two tasks and associated Technical Directives.

## **Deliverables and Schedule:**

Specific SuperMUSE 1.0, FRAMESZV2, and 3MRA V1/V2 Software components to be worked on by the contractor, and associated schedule, will be determined during execution of the WA. In evaluating content and acceptance criteria for deliverables, the following will generally apply:

Successfully executed test plan status (less Agency approval) for a given software component requires that:

1. Specific requirements related to the functionality of the software must be documented (as provided by the WAM within the Technical Directives);
2. All identified software bugs have been resolved by the contractor or reconciled as future work to be completed by the Agency (e.g., some bugs may not be able to be resolved at this time within

# "Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and

Contract: EP-W-09-024, Work Assignment: 1-03

---

- current resources);
- 3. Summary notations on modifications and additions to design and specifications sections of formal documentation have been posted to COLAB by the contractor;
- 4. Executed and notated test plans have been posted to COLAB by the contractor which satisfy all component requirements; and
- 5. Source code and compiled software codes have been posted to COLAB.

Successfully executed test plan status (with Agency approval) for a given software component requires that:

- 1. Successfully executed test plan status (less Agency approval) has been attained by the contractor for the given software component;
- 2. The Agency has reviewed and approved the executed test plan (via email notification to the contractor).

## *Completion Status for a Specific Technical Directive*

A specific Technical Directive will be deemed completed and no additional efforts should be expended by the contractor on the given request when either:

- 1. Currently approved hours associated with a given Technical Directive have been expended by the contractor and the contractor has provided a Summary Technical Progress Report for all components not completed,
  - 1.a. Based upon the WAM's assessment of degree of completion, the WAM may reauthorize the existing technical directive by adding additional hours to further complete the specific request. Alternatively, the WAM may also either choose to not expend additional effort, or otherwise roll some part or all of remaining tasking still to be completed into a new technical directive.
  - 1.b. In the event that the existing technical directive is re-authorized with additional hours and associated level of effort, the WAM will notify the contractor and EPA's Project Officer by re-issuing and notating the original technical directive, indicating both the previous authorized level already expended, the additional level (i.e., added hours) of effort that may be expended by the contractor, and priorities for the additional level of effort.

or

- 2. Successfully executed test plan status (with Agency approval) has been

# **"Technical Support for the Enhancement and Debugging of SuperMUSE V1, 3MRA V1/V2, and**

Contract: EP-W-09-024, Work Assignment: 1-03

---

attained for all components identified in the request.

## **Special Conditions**

1. All requests related to execution of the technical support described within this WA shall be coordinated through the EPA WAM.
2. The contractor shall not respond to requests or inquiries made by others individuals except where made by technical support staff approved by the WAM.
3. It is the responsibility of the contractor to ensure that a Summary Technical Progress Report for all components can be completed for a given request and delivered to the WAM prior to expending all hours for a given request (i.e., as necessary, final hours available for a given request should be used for this tasking).

## **III. POINT OF CONTACT**

### **Work Assignment Manager:**

Justin Babendreier  
ORD/NERL/ERD  
Regulatory Support Branch  
960 College Station Road  
Athens, GA 30605  
Office: (706) 355-8344  
Fax: (706) 355-8302  
Email: [babendreier.justin@epa.gov](mailto:babendreier.justin@epa.gov)



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Assignment Number

☐ Original ☒ Amendment Number: 1

Contract Number  
EP-W-09-024

Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Support for Renovation, Repair, and  
Painting Rule"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
See attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 06/25/10

To: 06/22/11

Comments:

This amendment approves the Technical and Financial Work Plan dated 09 July 2010, at a cost of \$344,985.00. Currently, there are 1,500 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	1,500
This Action	\$344,985.00	0
Total	\$344,985.00	1,500

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 07/09/10	Cost/Fee: \$344,985.00	LOE:
Cumulative Approved:	Cost/Fee: \$344,985.00	LOE: 1,500

Work Assignment Manager Name

RONALD J. MORONY

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0474

Fax Number (202) 566-0469

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title):

Date

# "Support for Renovation, Repair, and Painting Rule"

Contract: EP-W-09-024, Work Assignment: 1-04, Amendment: 0001

## Summary Information

Title: "Support for Renovation, Repair, and Painting Rule"  
Period of Performance: From: 06/25/10 To: 06/22/11  
Award Date: 06/25/10  
Total Funding:

## WA Totals

The following item(s) have been added:

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	



United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number

1-

☒ Original ☐ Amendment Number:

Title of Work Assignment

"Support for Renovation, Repair, and Painting Rule"

Contract Number  
EP-W-09-024

Contract Period

Base

Option Period Number

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

See attached Statement of Work

Purpose: ☒ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 06/25/10

To: 06/22/11

Comments:

Work Assignment Initiation

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee

LOE

Previously Approved

This Action

Total

\$0.00

1,500

### Work Plan / Cost Estimate Approvals

Contractor WP Dated :

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee: \$0.00

LOE: 1,500

Work Assignment Manager Name

Branch/Mail Code 7404T

Phone Number (202) 566-0474

Fax Number (202) 566-0469

(Signature)

(Date)

Project Officer Name

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# "Support for Renovation, Repair, and Painting Rule"

Contract: EP-W-09-024, Work Assignment: 1-04

## Summary Information

Title: "Support for Renovation, Repair, and Painting Rule"  
Period of Performance: From: 06/25/10  
To: 06/22/11  
Award Date:  
Total Funding:

## Procurement Management Roles

### WORK ASSIGNMENT MANAGER:

U.S. E.P.A.  
Attn: RONALD J. MORONY  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 7404T  
Phone Number: (202) 566-0474  
Fax Number: (202) 566-0469  
E-Mail Address: morony.ronald@epa.gov

### ALTERNATE WORK ASSIGNMENT MANAGER:

U.S. E.P.A.  
Attn: CLARENCE O. LEWIS  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 7404T  
Phone Number: (202) 566-1243  
Fax Number: (202) 566-0469  
E-Mail Address: lewis.clarence@epa.gov

## Attachments

Attachment Name

"Support for Renovation, Repair, and Painting Rule"

# **"Support for Renovation, Repair, and Painting Rule"**

Contract: EP-W-09-024, Work Assignment: 1-04

---

**Contract Number EP-W-09-024**

**Work Assignment Number: 1-04**

**Change Number: 0**

**Title:** Support for the Lead-Based Paint Program

**Purpose:** To provide technical support of the implementation of the Renovation, Repair and Painting Program as well as all other aspects of the Lead-Based Paint Program. This is continuation of work begun under work assignment 0-04 of this contract. No work shall be duplicated.

**A. Background:** Title IV of the Residential Lead-Based Paint Poisoning Prevention Act requires EPA to undertake various actions to reduce the incidence of lead poisoning. These actions include technical studies to support rule making, outreach to the regulated community, outreach to the public and support of the regulatory functions.

## **B. Scope of Work:**

### **Task 1 RRP Logo Site**

The contractor shall develop and maintain the web site where certified renovation firms can access and download the RRP logo with their own certification number. The contractor shall also provide an email address and phone number to answer technical questions on the downloading of the RRP logo. At times it may be necessary to link that email address to a staff person from EPA.

### **Task 2 Cleaning Verification Cards**

When directed by the WAM, the contractor shall provide Cleaning Verification Cards that meet the quality control standards previously developed. The cards shall be shipped to the National Lead Information Center in Rochester, NY. It is anticipated that the cards will be produced in batches of 150,000. Assume that 450,000 cards will be ordered during this contract year.

### **Task 3 Support of the Outreach Efforts at Trade Shows**

When directed by the WAM, the contractor shall purchase exhibit space at trade shows and shall staff the EPA provided booth. These services include shipping the EPA booth to the show and returning it to a location designated by the WAM. Also include in this task is travel to the shows, paying for incidental fees such as drapes, delivery charges, etc.

### **Task 4 Technical Studies**

## **"Support for Renovation, Repair, and Painting Rule"**

Contract: EP-W-09-024, Work Assignment: 1-04

---

When directed by the WAM the contractor shall provide technical studies in support of rule making. These studies include but are not limited to literature searches, convening expert panels or physical demonstrations. The exact nature of the study will be specified by the WAM.

### **Task 5 Support of the Development of Publications**

When directed by the WAM, the contractor shall provide services to create or modify publications related to National Program Chemicals. This includes but is not limited to development of drafts, mock ups and final copy ready for printing. The documents must be 508 compliant and be delivered in a format specified by the WAM.

### **Task 6 Modification to Training Courses and Third Party Exams**

When directed by the WAM, the contractor shall provide services to create or modify Training Courses or Third Party Exams. This includes but is not limited to development of drafts, mock ups and final copy ready for printing or deployment to the Third Party Exam provider. The documents must be 508 compliant and be delivered in a format specified by the WAM.

### **C. Deliverables:**

Task 1. This task is ongoing. The activity shall be reported in the monthly report.

Task 2. Delivery of the cards to the NLIC. The delivery shall be documented in the monthly report.

Task 3. A report on the show within 3 weeks of attendance.

Tasks 4, 5 and 6. As specified in the technical direction..

**A work plan is not required.**

**A QA/QC plan is not required.**

**CBI does not apply.**

This work assignment relates to Tasks II, III and IV of the current Statement of Work (SOW) of the contract.

### **D. Period of Performance:**

This work assignment will start on the date of the contracting officer's signature and extend through June 22, 2011.

# **"Support for Renovation, Repair, and Painting Rule"**

Contract: EP-W-09-024, Work Assignment: 1-04

---

## **E. Level of Effort:**

This work assignment shall require no more than 1500 more professional hours.

## **F. EPA Contacts:**

### Work Assignment Manager:

Ronald J. Morony  
US EPA National Program Chemicals Division  
Program Assessment and Outreach Branch (7404T)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
Ph: 202-566-0474  
Fax: 202-566-0469

### Deputy Work Assignment Manager:

Clarence Lewis  
US EPA National Program Chemicals Division  
Lead, Heavy Metals and Inorganics Branch(7404T)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
Ph: 202-566-1243  
Fax: 202-566-0469



United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-05

## Work Assignment

☐ Original ☒ Amendment Number: 3

Contract Number  
EP-W-09-024

Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Technical Support for PCB Permit and Document Development"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
see attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance

From: 07/08/10

To: 06/22/11

Comments:

This amendment approves the Technical and Financial Work Plan dated 21 October 2010, at a cost of \$81,022.00. Currently, there are 739 PLHs allocated for this Work Assignment.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$17,898.00	766
This Action	\$81,022.00	(27)
Total	\$98,920.00	739

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: 10/21/10	Cost/Fee: \$81,022.00	LOE: 27
Cumulative Approved: 12/03/10	Cost/Fee: \$98,920.00	LOE: 739

Work Assignment Manager Name

WINSTON M. LUE

(Signature)

(Date)

Branch/Mail Code 5303P

Phone Number (703) 305-1617

Fax Number (703) 308-8638

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# "Technical Support for PCB Permit and Document Development"

Contract: EP-W-09-024, Work Assignment: 1-05, Amendment: 0003

## Summary Information

Title: "Technical Support for PCB Permit and Document Development"  
Period of Performance: From: 07/08/10  
To: 06/22/11  
Award Date: 07/08/10  
Total Funding:

## Procurement Management Roles

*The following item(s) have been modified:*

ADMINISTRATIVE CONTRACTING OFFICER:

U.S. E.P.A.  
Attn: CHRISTINE EDWARDS  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 3803R  
Phone Number: (202) 564-2182  
Fax Number:  
E-Mail Address: edwards.christine@epa.gov

## WA Totals

*The following item(s) have been modified:*

Category	POP	From	By	To
Estimated Cost	Option 1	\$ (b)(4)		
Fixed Fee	Option 1			

## WA Classification

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 766 to 739.

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-03

**Work Assignment**☐ Original ☒ Amendment Number: 2Contract Number  
EP-W-09-024Contract Period  
Base Option Period Number 1Title of Work Assignment  
"Technical Support for PCB Permit and Document Development"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
see attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan ApprovalPeriods of Performance  
From: 07/08/10 To: 06/22/11

Comments:

The purpose of this amendment is to add 618 PLHs to the current LOE. There are no revisions to the SOW. A Financial Work Plan is required.

☐ Superfund**Accounting and Appropriations Data**☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

**Authorized Work Assignment Ceiling**

Contract Period:	Cost/Fee	LOE
Previously Approved	\$17,898.00	148
This Action	\$0.00	618
Total	\$17,898.00	766

**Work Plan / Cost Estimate Approvals**

Contractor WP Dated :	Cost/Fee:	LOE: 618
Cumulative Approved:	Cost/Fee: \$17,898.00	LOE: 766

Work Assignment Manager Name

WINSTON M. LUE

Branch/Mail Code 5303P

Phone Number (703) 305-1617

Fax Number (703) 308-8638

(Signature)

(Date)

Project Officer Name

SINETA WOOTEN

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

DENNIS J. BUSHTA

9/22/10

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05, Amendment: 0002

---

## **Summary Information**

Title: "Technical Support for PCB Permit and Document Development"  
Period of Performance: From: 07/08/10  
To: 06/22/11  
Award Date: 07/08/10  
Total Funding:

## **Procurement Management Roles**

*The following item(s) have been modified:*

ADMINISTRATIVE CONTRACTING OFFICER:

U.S. E.P.A.  
Attn: DENNIS J. BUSHTA  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 3803R  
Phone Number: (202) 564-2182  
Fax Number:  
E-Mail Address: edwards.christine@epa.gov

## **WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 148 to 766.

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-05

## Work Assignment

☐ Original ☒ Amendment Number: 1Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment

"Technical Support for PCB Permit and Document Development"

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

see attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out☒ Work Assignment Amendment ☐ Incremental Funding☒ Work Plan Approval

Periods of Performance

From: 07/08/10

To: 06/22/11

Comments:

This amendment approves the Technical and Financial Work Plan dated 28 July 2010, at a cost of \$17,898.00. Currently, there are 148 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:  
Previously ApprovedCost/Fee  
\$0.00LOE  
113

This Action

\$17,898.00

35

Total

\$17,898.00

148

## Work Plan / Cost Estimate Approvals

Contractor WP Dated: 07/28/10

Cost/Fee: \$17,898.00

LOE: 35

Cumulative Approved:

Cost/Fee: \$17,898.00

LOE: 148

Work Assignment Manager Name

WINSTON M. LUE

(Signature)

(Date)

Branch/Mail Code 5303P

Phone Number (703) 305-1617

Fax Number (703) 308-8638

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05, Amendment: 0001

---

## **Summary Information**

Title: "Technical Support for PCB Permit and Document Development"  
Period of Performance: From: 07/08/10  
To: 06/22/11  
Award Date: 07/08/10  
Total Funding:

## **WA Totals**

*The following item(s) have been added:*

Category	POP	Amount
-----	-----	-----
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	

## **WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 113 to 148.



## Work Assignment

☒ Original ☐ Amendment Number:

Contract Number  
EP-W-09-024

Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Technical Support for PCB Permit and Document Development"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
see attached Statement of Work

Purpose: ☒ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 07/08/10

To: 06/22/11

Comments:  
Work Assignment Initiation

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee

LOE

Previously Approved

This Action

Total

\$0.00

113

### Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee: \$0.00

LOE: 113

Work Assignment Manager Name

WINSTON M. LUE

(Signature)

(Date)

Branch/Mail Code 5303P

Phone Number (703) 305-1617

Fax Number (703) 308-8638

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05

---

## **Summary Information**

Title: "Technical Support for PCB Permit and Document Development"  
Period of Performance: From: 07/08/10  
To: 06/22/11  
Award Date:  
Total Funding:

## **Procurement Management Roles**

### **WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: WINSTON M. LUE  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 5303P  
Phone Number: (703) 305-1617  
Fax Number: (703) 308-8638  
E-Mail Address: lue.winston@epa.gov

### **ALTERNATE WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: AMY R. HENSLEY  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 5303P  
Phone Number: (703) 305-5084  
Fax Number: (703) 308-0509  
E-Mail Address: hensley.amy@epa.gov

## **Attachments**

### **Attachment Name**

-----  
SOW entitled, "Technical Support for PCB Permit and Document Development"

**STATEMENT OF WORK**

**Contract Number: EP-W-09-024, Option 1**

**Work Assignment: 0-05**

**Title: Performance Based Work Assignment -Technical Support for PCB Permits and Document Development**

**Background:**

The Toxic Substance Control Act (TSCA) of 1976 requires EPA to develop rules to regulate the manufacture, processing, distribution in commerce, use, or disposal of chemical substances. Section 6(e) of the Act specifically names polychlorinated biphenyls (PCBs), requiring rules to specify methods for the disposal of PCBs.

Regulations promulgated in Subpart D of 40 CFR 761 authorize EPA Headquarter to issue PCB disposal approvals, valid nationwide, to mobile disposal facilities and fixed facilities as well as issue PCB alternative decontamination approvals. TSCA regulations delegate signatory authority to the Assistant Administrator of the Office of Solid Waste and Emergency Response (OSWER) for permits issued by EPA Headquarters. In FY 2008, EPA transferred the administration and implementation of the Toxic Substances Control Act's (TSCA) Polychlorinated Biphenyl (PCB) Cleanup and Disposal Program from the Office of Prevention, Pesticides and Toxic Substances (OPPTS) to the Office of Solid Waste and Emergency Response (OSWER).

Individuals seeking approvals to dispose of PCBs or decontaminate PCB-contaminated materials must submit a permit application and a demonstration plan for EPA review. EPA reviews the permit application for completeness. The application must include the demonstration plan indicating a demonstration can be performed safely with a good probability of success. Once the application review is complete, EPA will require the company to demonstrate the operation of its technology under reasonable worst case operating conditions. EPA will issue an approval to operate the alternative disposal or decontamination technology once the company has demonstrated their PCB disposal or decontamination process is effective, the technology is capable of processing PCB material without frequent breakdowns, and does not present unreasonable risks to health and the environment.

Typically, PCB disposal technologies are classed into three categories, (a) incineration, (b) thermal alternative technology, and (c) non-thermal alternative technology. Alternative technologies include surface and aqueous media decontamination processes. The alternative disposal technology must be demonstrated in the presence of EPA evaluators. During the demonstration, EPA will collect samples of materials before and after treatment to confirm the PCBs were destroyed. Upon confirmation of PCB destruction, EPA will issue an approval for the technology.

**I. Purpose:**

Any person wishing to dispose of PCBs must use approved methods and must obtain an approval. Several methods for disposal and decontamination are listed in §761, but alternative technologies for disposal and decontamination may be used if an approval is granted by the EPA. Persons can apply to the EPA for approval of PCB disposal by non-thermal alternative methods (§761.60(e)), alternative decontamination procedures (§761.79(h)), thermal alternative methods (§761.60(e)), and incineration (§761.70). EPA must confirm the PCB Disposal and decontamination technologies demonstrated by permit applicants comply with EPA requirements. To accomplish this, EPA will require contractor support.

At the direction of the Work Assignment Manager, the Contractor shall prepare and ship sampling kits to sites designated by the WAM. EPA will collect samples during the PCB Disposal or Decontamination Demonstration, pack the samples, and send the samples to the Contractor. The Contractor shall analyze samples collected by EPA to confirm the technologies destroy and/or remove PCBs from various waste feed matrices or materials. The Contractor shall prepare QA samples in a variety of matrices for EPA to evaluate the laboratory facilities to be used by the applicant during commercial PCB Disposal or Decontamination operation or during the PCB Disposal or Decontamination demonstration. The Contractor shall transmit preliminary analytical results of the demonstration samples to EPA. These preliminary results will assist EPA in determining the efficacy of the new disposal or decontamination technologies.

The Contractor shall develop a document that will help persons apply for approvals for alternative technologies under §761. The document will discuss requirements for approval applications, demonstration test plans, demonstration test reports, as well as describe the approval process and how to conduct a demonstration. Other elements may be requested by the WAM.

The contractor shall also develop other documents that will provide information to the regulated community on how to cleanup and dispose of PCBs in compliance with the PCB Regulations (§761). These documents will help persons apply for disposal and cleanup PCB approvals from the EPA.

## **II. Scope of Work:**

A. PCB Disposal and Decontamination Demonstrations. There are approximately five possible demonstrations covered under this Work Assignment. Generally, EPA collects a set of samples for starting material or feed, samples of treated material and samples of process waste. At times, in addition to the standard samples for feed, process streams, and process waste, questionable process or waste streams may be sampled to clarify regulatory status of the material. Also, blind QA audit samples may, at the direction of the WAM, be shipped to the laboratory selected to perform the permit applicant's product analysis during commercial operations. For the different types of demonstrations, the estimated number of samples and type of samples to be collected by EPA for analysis are listed below. Possibility exists that one of the demonstrations may involve sampling and analysis of low radioactive material.

# **SOW entitled, "Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05

---

1 – Alternative Thermal technology approval. Feed and treated material may contain low radioactive substances.

Samples: Liquid or non-liquid feed (3), treated material (3), water discharge (3), QA samples (3).

2 – Alternative Non-thermal technology approval. Feed and treated material may contain low radioactive substances.

Samples: Liquid or non-liquid feed material (3), treated material (3), water discharge (3), QA samples (3).

3 – Alternative decontamination approval.

Samples: Wipe samples before treatment (3), wipe samples after treatment (3), QA samples (3), water discharge (3).

**B. Documents on PCB Cleanup and Disposal – PCB** Any person wishing to dispose of PCBs must use approved methods and must obtain an approval. The person must first submit an application package to their EPA Regional Office or to EPA Headquarters, depending on the signing authority for their approval. For disposal approvals, demonstrations are often required, which involve submission of test plans and test results to the EPA. This Work Assignment covers the development of documents that describe the components of and level of detail needed for PCB disposal or cleanup approvals.

## **B. Work Tasks**

### **Task 1. Task Management**

The Contractor shall prepare and submit a work plan. Work under this task shall include participating in conference calls, meetings, preparing the monthly progress report and other task management. This assignment requires a QA/QC plan. EPA will review and comment on the work plan and the QA/QC plan within 45 days. This statement of work also requires the use of TSCA CBI.

### **Task 2. Preparation of a QA/QC Plan.**

The Contractor shall prepare a Quality Assurance Project Plan for the analysis of all collected samples during the duration of this work assignment. The Quality Assurance Plan will follow the format and requirements as specified in "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (2001, EPA/240/B-01/003). A draft of that plan will be submitted for review by the WAM. The Contractor shall incorporate the comments and submit a final version of the Quality Assurance Project Plan.

**NOTE:** The tasks below represent all of the possible items that may be required by EPA to support the PCB cleanup and disposal program. Written technical direction will be provided by the WAM which will specify the items and quantities needed for each permit.

**Task 3. Sample Collection and Analysis**

A. EPA will observe on-site the PCB Disposal or Decontamination Demonstrations and will collect samples and transfer the samples to the Contractor. The Contractor shall analyze the samples appropriately, as outlined below.

- (1) For analysis of polychlorinated biphenyls (PCBs), the Contractor shall analyze samples for classes of PCB compounds named Aroclor. These compounds include but are not limited to the following:

Aroclor 1242	Aroclor 1264
Aroclor 1254	Aroclor 1016
Aroclor 1260	

- (2) For analysis of PCBs, the Contractor shall provide analytical instrument capability and methodologies to analyze and to identify the 209 congeners of polychlorinated biphenyls.
- (3) For analysis of PCBs, the Contractor shall provide analytical instrument capability and methodologies to analyze and to identify PCBs, separating and quantitating the identified PCBs in homologs from mono- to deca-chlorinated biphenyls. The analytical standard to be used shall be the Dry Color Manufacturer Association (DCMA) standard or equivalent.
- (4) The Contractor shall transmit analytical results of the demonstration samples to EPA in three stages. First, the raw data will be submitted by telephone or email as directed by the WAM. These results will assist EPA in determining the efficacy of the new disposal or decontamination technologies. Second, the Contractor shall prepare a draft digital report. Third, after receiving comments from the WAM, the Contractor shall then prepare the final analytical results which incorporate the WAM's comments.
- (5) The Contractor shall analyze for other pollutants of interest as directed by the WAM. For example, PCBs in the U.S. is in short supply. The possibility exists that surrogates for PCBs may necessarily be used during PCB Disposal or Decontamination Demonstration. Should surrogates be used, the Contractor shall analyze samples for the surrogates. An example of a surrogate is trichlorobenzene.

B. **Sample Media.** The Contractor shall implement analytical methods suitable to the medium of interest. Examples of media include crankcase oil; mineral oil; solvents such as ethylene glycol; soils such as clay, sediment or sand; fly ash; and clinkers.

C. **Sampling Kit.**

- (1) The Contractor shall provide sampling kits (described below) for each demonstration suitable for the collection of samples of various media, but not limited to bulk solids such as soil; and bulk liquids such as fuel oil, solvents and water.
  - (2) The Contractor shall provide a sampling kit suitable for the collection and analysis of samples from porous surfaces (concrete, paint) and non-porous surfaces (metal).
- D. For thermal technologies including incineration, the Contractor may be requested by the WAM to observe the collection of samples from various process streams and obtain split samples for analysis by the Contractor.
- E. The Contractor may be requested to provide personnel with appropriate experience and appropriate certificates to take the samples for any of the technologies and any of the media.
- F. The Contractor shall submit a preliminary analysis to the WAM for review and comment. Upon receipt of the comments the Contractor shall incorporate the comments into the final report.

**Task 4. PCB Disposal and Decontamination Demonstration Requiring Review of Sampling Protocols**

- A. For thermal technologies including incineration, the Contractor may be requested by the WAM to review the applicant's demonstration trial burn plan, to determine/plan the work schedule. Contractor should already be familiar with the process and equipment, from previous work with identical incinerator equipment.
- B. For thermal technologies including incineration, the Contractor may be requested to determine if the applicants' stack emission sampling protocols to be used during the trial burn comply with EPA standards.

**Task 5. Sampling Kit for PCB Disposal and Decontamination Demonstrations**

The Contractor shall provide, at the direction of the WAM, a sampling kit for EPA PCB Disposal or Decontamination technology evaluators. Sampling items are to be shipped in a cooler ranging in size from one (1) gallon to ten (10) gallons, as appropriate. Packing material must be provided and used as appropriate to minimize breakage of items.

At minimum, the following items shall be provided in the shipping cooler:

- A. Traceability Log Forms (3 sheets minimum)
- B. Quadruplicated bar codes in self-adhering format (3 sheets - 15 codes minimum per sheet). Traceability forms must accommodate bar codes and sample description.
- C. Labels for sample containers to identify samples.

# **SOW entitled, "Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05

- D. Disposable gloves (12 pairs minimum)
- E. Wide mouth 100 ml. sampling jars, or 40 ml. vials "VOC" sampling type, or a mixture of jars and vials as specified by WAM.
- F. Spatulas, two medium size, metal
- G. One fine tip marker, waterproof
- H. Two writing pens, ball point or fine felt tip
- I. "Blue ice" or chemical ice pack for sample preservation
- J. Evidence tape, 2 feet in length
- K. Shipping bill or air bill prepared for shipping samples to Contractor on overnight basis
- L. "Zip locking" plastic bag to protect documents
- M. Extra sampling containers in case of breakage or process anomaly
- N. Paper towels, e.g. "Kimwipes"

Blind QA audit samples shall be prepared to evaluate laboratory(s) designated by applicants to analyze samples for the demonstration or for commercial operations. The audit sample(s) may be prepared using various media such as sand, oil or water. Optional items below, which are required at times, specified by the WAM, for specific projects.

- O. One-liter jars for aqueous samples, quantity to be specified.
- P. Wipe Sampling Kit:
  - (1) Folded cotton gauze pad (e.g. 4"x4"), inserted in 100 ml wide mouth jar
  - (2) Gauze pad saturated with solvent (e.g. hexane)
  - (3) Template for wiping 100 centimeter square area or as specified
  - (4) Template disposal or reusable, as specified
  - (5) Quantity to be specified by WAM
  - (6) Solvent to be specified by WAM
- Q. Spoon or other instruments for sampling

## **Task 6. Further Development of Document on PCB Cleanup and Disposal Approval Applications**

Further develop and update a document entitled "Guidelines for Approval Applications and Demonstration Test Plans for PCB Disposal by Non-Thermal Alternative Methods, Thermal Alternative Methods, and Incineration."

The Contractor shall develop a final document which may be distributed to persons desiring a PCB Disposal Approval. The Contractor shall incorporate comments from Regional Offices and Headquarters on the draft documents, as directed by the WAM.

## **Task 7. Develop documents on PCB Cleanup and Disposal.**

As directed by the WAM, the Contractor shall develop documents which may be distributed to persons desiring PCB cleanup or disposal approvals. The contractor shall prepare a draft of the document. The Contractor shall incorporate comments from Regional Offices and Headquarters into the draft document, as directed by the WAM.

**III. Deliverables:**

**Task 1.** Within 30 days of issuance of contract, the Contractor shall submit a Work Plan for review and acceptance.

**Task 2.** Within 30 days of issuance, the Contractor shall submit a QA/QC Plan for review and acceptance.

**Task 3. Results.** Within two weeks of receipt of samples unless otherwise approved by the WAM, Contractor shall submit raw data of the sample chemical analysis. These raw data shall be transmitted in the form of a phone call or email as directed by the WAM. Within three weeks of the receipt of the samples the Contractor shall provide a draft digital report of the chemical analysis. When the Government provides comments on the draft digital report the Contractor shall produce a final report within 30 days of the receipt of the Government's comments. The final report shall be in pdf or other format (.doc) as specified by the WAM.

**Task 4.** Within 20 days of receipt of a copy of the permit applicant demonstration plan, the Contractor will review and submit a summary report of the demonstration plan.

**Task 5.** Within 7 days of request by the WAM, the Contractor will ship a sampling kit to the demonstration site for use by EPA or its representative.

**Task 6.** Within 30 days of receiving the draft document to be developed, the Contractor shall give a draft for EPA review, both hard copy and electronic copy. Upon receipt of comments from the WAM, the Contractor shall incorporate those comments within 30 days. After the WAM specifies that no further comments are forthcoming, the Contractor shall submit a final document in Microsoft Word format or other format as specified by the WAM.

**Task 7.** Within 30 days of receiving direction from the WAM to develop and update the document, the Contractor shall give a draft for review, both hard copy and electronic copy. Upon receipt of comments from the WAM, the Contractor shall incorporate those comments within 30 days. After the WAM specifies that no further comments are forthcoming, the Contractor shall submit a final document in Microsoft Word format or other format as specified by the WAM.

A Work Plan is required.

EPA will approve the work plan within 45 days.

A QA/QC plan is required

CBI does apply.

Work previously performed under this WA shall not be duplicated.

This work assignment relates to "Task 3. Sample Collection and Analysis" and "Task 4.

# **SOW entitled, "Technical Support for PCB Permit and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05

---

PCB Disposal and Decontamination Demonstrations Requiring Review of Sampling Protocols" of the current Statement of Work (SOW) of the contract.

The contractor's performance shall be judged by 1) timeliness in meeting the four week deadline for submission and 2) completeness by including all the required QAP elements. See section on Performance Measures below.

## **Performance Measures:**

The government shall review the promptness of submitting the Field Study QAP as required in this WA. If the contractor is late by more than 14 calendar days, from the due date specified in the WA, on the QAP, the government shall take a 10% reduction in the fee associated with the QAP. The reduction shall be applied to all fees, both the paid fee and unpaid fee.

The government shall review the completeness of the QAP as required in this WA. If the contractor's QAP is missing one or more of the required elements, as listed in the WA, the government shall take a 10% reduction in the fee associated with this WA. The reduction will be applied to all fees, both the paid fee and the unpaid fee.

The government shall review the results of the physical testing as required in the Tasks of this WA. If the contractor has failed to perform the physical testing in accordance with the latest approved QAP for that element, the government shall take a 30% reduction in the fee associated with that work. The reduction will be applied to all fees, both the paid fee and the unpaid fee.

## **IV. Period of Performance:**

This work assignment will start on the date of the contracting officer's signature and extend through June 2, 2011.

## **V. Level of Effort:**

This work assignment shall require 113 professional hours.

## **VI. EPA Contact:**

### **Work Assignment Manager:**

Winston Lue  
Mail Code 5303P  
1200 Pennsylvania Ave NW  
Washington, DC 20460  
Phone: (703)305-1617  
Fax: (703)308-8638

**SOW entitled, "Technical Support for PCB Permitting and Document Development"**

Contract: EP-W-09-024, Work Assignment: 1-05

---

Email: [lue.winston@epa.gov](mailto:lue.winston@epa.gov)

Courier Service Address:  
Potomac Yard North  
2733 S. Crystal Drive  
Room N-6331  
Arlington, VA 22202

**Deputy Work Assignment Manager:**

Amy Hensley  
Mail Code 5303P  
1200 Pennsylvania Ave NW  
Washington, DC 20460  
Phone: (703)305-5084  
Fax: (703)308-8638  
Email: [hensley.amy@epa.gov](mailto:hensley.amy@epa.gov)

Courier Service Address:  
Potomac Yard North  
2733 S. Crystal Drive  
Room N-6324  
Arlington, VA 22202



## Work Assignment

☐ Original ☒ Amendment Number: 3Contract Number  
EP-W-09-024Contract Period  
Base Option Period NumberTitle of Work Assignment  
"Performance-Based Work Assignment for  
Verifying the Performance Characteristics of  
Qualitative Spot Test Kits for Lead in Paint  
for Environmental Technology Verification  
(ETV)"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
see attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan ApprovalPeriods of Performance  
From: 06/25/10 To: 06/22/11

## Comments:

This amendment approves the Financial Work Plan dated 24 September 2010, at a cost of \$15,337. Currently, there are 295 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$24,370.00	288
This Action	\$15,337.00	7
Total	\$39,707.00	295

## Work Plan / Cost Estimate Approvals

Contractor WP Dated :09/24/10	Cost/Fee: \$15,337.00	LOE: 7
Cumulative Approved:	Cost/Fee: \$39,707.00	LOE: 295

Work Assignment Manager Name

JULIUS M. ENRIQUEZ

(Signature)

(Date)

Branch/Mail Code MS208

Phone Number (513) 569-7285

Fax Number (513) 569-7158

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

**"Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"**

Contract: EP-W-09-024, Work Assignment: 1-06, Amendment: 0003

**Summary Information**

Title: "Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"

Period of Performance: From: 06/25/10  
To: 06/22/11

Award Date: 06/25/10

Total Funding:

**WA Totals**

*The following item(s) have been modified:*

Category	POP	From	By	To
Estimated Cost	Option 1	\$ (b)(4)		
Fixed Fee	Option 1			

**WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 288 to 295.

United States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number

1-06

**Work Assignment**☐ Original ☒ Amendment Number: 2Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Performance-Based Work Assignment for  
Verifying the Performance Characteristics of  
Qualitative Spot Test Kits for Lead in Paint  
for Environmental Technology Verification  
(ETV)"Contractor  
BATTELLE MEMORIAL INSTITUTESpecify Section and Paragraph of Contract SOW  
see attached Statement of WorkPurpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 06/25/10

To: 06/22/11

## Comments:

This amendment increases the LOE because the Work Plan submitted was more extensive than  
estimated by the Government. A revised Financial Work Plan is required.☐ Superfund**Accounting and Appropriations Data**☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

**Authorized Work Assignment Ceiling**

Contract Period:	Cost/Fee	LOE
Previously Approved	\$24,370.00	188
This Action	\$0.00	100
Total	\$24,370.00	288

**Work Plan / Cost Estimate Approvals**

Contractor WP Dated:	Cost/Fee:	LOE: 100
Cumulative Approved:	Cost/Fee: \$24,370.00	LOE: 288

Work Assignment Manager Name

JULIUS M. ENRIQUEZ

Branch/Mail Code MS208

Phone Number (513) 569-7285

Fax Number (513) 569-7158

(Signature)

(Date)

Project Officer Name

SINETA WOOTEN

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

CHRISTINE EDWARDS

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

**"Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"**

Contract: EP-W-09-024, Work Assignment: 1-06, Amendment: 0002

---

**Summary Information**

Title: "Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"

Period of Performance: From: 06/25/10  
To: 06/22/11

Award Date: 06/25/10

Total Funding:

**WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 188 to 288.



## Work Assignment

☐ Original ☒ Amendment Number: 1

Contract Number  
EP-W-09-024

Contract Period  
Base Option Period Number

Title of Work Assignment  
"Performance-Based Work Assignment for  
Verifying the Performance Characteristics of  
Qualitative Spot Test Kits for Lead in Paint  
for Environmental Technology Verification  
(ETV)"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
see attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance  
From: 06/25/10 To: 06/22/11

Comments:

This amendment approves the Technical and Financial Work Plan dated 08 July 2010, at a cost of \$24,370.00. Currently, there are 188 Professional Labor Hours allocated for this Work Assignment.

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 5)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	292
This Action	\$24,370.00	(104)
Total	\$24,370.00	188

### Work Plan / Cost Estimate Approvals

Contractor WP Dated :07/08/10	Cost/Fee: \$24,370.00	LOE: 104
Cumulative Approved:	Cost/Fee: \$24,370.00	LOE: 188

Work Assignment Manager Name

Branch/Mail Code MS208

JULIUS M. ENRIQUEZ

Phone Number (513) 569-7285

(Signature)

(Date)

Fax Number (513) 569-7158

Project Officer Name

Branch/Mail Code 7404T

SINETA WOOTEN

Phone Number (202) 566-0501

(Signature)

(Date)

Fax Number (202) 566-0469

Other Agency Official Name

Branch/Mail Code

Phone Number

(Signature)

(Date)

Fax Number

Contracting Official Name

Branch/Mail Code 3803R

CHRISTINE EDWARDS

Phone Number (202) 564-2182

(Signature)

(Date)

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

**"Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"**

Contract: EP-W-09-024, Work Assignment: 1-06, Amendment: 0001

---

**Summary Information**

Title: "Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"

Period of Performance: From: 06/25/10  
To: 06/22/11

Award Date: 06/25/10

Total Funding:

**WA Totals**

*The following item(s) have been added:*

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	

**WA Classification**

*The following changes have occurred:*

The Labor Hour Ceiling has changed from 292 to 188.



States Environmental Protection Agency  
Washington, DC 20460

Work Assignment Number  
1-0

## Work Assignment

Contract Number  
**EP-W-09-024**

Contract Period  
Base Option Period Number

☒ Original ☐ Amendment Number:

Title of Work Assignment  
**"Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"**

Contractor  
**BATTELLE MEMORIAL INSTITUTE**

Specify Section and Paragraph of Contract SOW  
**see attached Statement of Work**

Purpose: ☒ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance  
From: **06/25/10** To: **06/22/11**

Comments:  
**Work Assignment Initiation**

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period: Cost/Fee LOE  
Previously Approved

This Action

Total \$0.00 292

### Work Plan / Cost Estimate Approvals

Contractor WP Dated: Cost/Fee: LOE:

Cumulative Approved: Cost/Fee: \$0.00 LOE: 292

Work Assignment Manager Name

**JULIUS M. ENRIQUEZ**

(Signature)

(Date)

Branch/Mail Code **MS208**

Phone Number **(513) 569-7285**

Fax Number **(513) 569-7158**

Project Officer Name

**SINETA WOOTEN**

(Signature)

(Date)

Branch/Mail Code **7404T**

Phone Number **(202) 566-0501**

Fax Number **(202) 566-0469**

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

**CHRISTINE EDWARDS**

(Signature)

(Date)

Branch/Mail Code **3803R**

Phone Number **(202) 564-2182**

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"**

Contract: EP-W-09-024, Work Assignment: 1-06

---

## **Summary Information**

Title: "Performance-Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)"

Period of Performance: From: 06/25/10  
To: 06/22/11

Award Date:

Total Funding:

## **Procurement Management Roles**

### **WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: JULIUS M. ENRIQUEZ  
26 W MARTIN LUTHER KING  
DRIVE  
CINCINNATI, OH 45268

Mail Code: MS208  
Phone Number: (513) 569-7285  
Fax Number: (513) 569-7158  
E-Mail Address: enriquez.julius@epa.gov

### **ALTERNATE WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: EVELYN M. HARTZELL  
26 W MARTIN LUTHER KING  
DRIVE  
CINCINNATI, OH 45268

Mail Code: MS208  
Phone Number: (513) 569-7728  
Fax Number: (513) 569-7158  
E-Mail Address: hartzell.evelyn@epa.gov

## **Attachments**

### **Attachment Name**

-----  
Performance-based WA for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)

Contract Number: EP-W-09-024 (Should be same contract number)

Work Assignment Number: 1-06

This is a continuation of WA 0-06 under contract EP-W-09-024. Work already completed under this work assignment shall not be duplicated.

**Title: Performance Based Work Assignment for Verifying the Performance Characteristics of Qualitative Spot Test Kits for Lead in Paint for Environmental Technology Verification (ETV)**

**Background:**

The accurate and efficient identification of lead-based paint in housing is important to the Federal government and to private individuals living in residences containing such paints, especially when renovation, repair or painting work is planned. Renovation, repair and painting (RRP) may disturb painted surfaces and produce a lead exposure hazard. According to a recent report by the President's Task Force on Environmental Health Risks and Safety Risks to Children, approximately 24 million U.S. dwellings were at risk for lead-based paint hazards in 1999 (1). The term lead-based paint means paint or other surface coatings that contain lead at contents that "equal or exceed a level of 1.0 milligram per centimeter squared or 0.5 percent by weight"

EPA issued a final rule called the Lead; Renovation, Repair, and Painting Program rule on April 22, 2008 (<http://www.epa.gov/fedrgstr/EPA-TOX/2008/April/Day-22/t8141.pdf>). The rule was issued to address lead-based paint hazards created by renovation, repair, and painting activities that disturb lead-based paint in target housing and child-occupied facilities. The rule mentions the development of an improved test kit for paint that has a false negative rate of no more than 5% and a false positive rate of no more than 10% vis-à-vis the federal standards for lead-based paint. Under this rule the EPA evaluation and recognition program for test kits, initially for kits that are candidates to meet the goal of a 5% false negative rate, and then for kits that are candidates to meet the joint goals of a 5% false negative rate and a 10% false positive rate are mentioned.

The current rule on p 21713 states that test kit performance would have to be "validated by a laboratory independent of the kit manufacturer, using ASTM International's E1828, Standard Practice for Evaluating the Performance Characteristics of Qualitative Chemical Spot Test Kits for Lead in Paint (Ref. 28) or an equivalent validation method. The instruction for use of any particular kit would have to conform to the results of the validation, and the certified renovator must follow the manufacturer's instructions when using the kit." Some of the main features of the ASTM document will be used for the evaluation testing of these kits and EPA will only recognize kits that have been properly validated by a laboratory independent of the kit manufacturer.

The rule also states on page 21713 that with respect to the improved test kits, EPA has determined that Environmental Technology Verification Program (ETV) is a suitable vehicle for obtaining independent laboratory validation of test kit performance. EPA intends to use ETV or

an equivalent testing program approved by EPA for the test kit recognition process. EPA's Environmental Technology Verification (ETV) Program develops testing protocols/plans and verifies the performance of innovative technologies that have the potential to improve protection of human health and the environment. ETV was created to accelerate the entrance of new environmental technologies into the domestic and international marketplace. Market input is conveyed by the active involvement of stakeholder groups consisting of technology buyers, sellers, permittees, consultants, financiers, exporters and others within each sector. Further, verification is open to all vendors of commercial-ready environmental technologies in a given category of interest to ETV. ETV verifies agency priorities, like the determination of lead in paint test kits performance, under the Environmental and Sustainable Technology Evaluations (ESTE) portion of the ETV program.

ETV has developed three documents to help guide program operation and ensure program credibility and consistency. The first document is the ETV Quality Management Plan (QMP). This is a program management document used by ETV to guide its operation. The ETV QMP explains in detail the quality assurance policies and procedures, including the development of center-specific QMPs by the verification organizations (VOs), in the case of the Environmental and Sustainable Technology Evaluation projects like this one, test/QA plans that contain or references quality management system documentation that meets ETV standards. The second is the ETV Program Policy Compendium, which defines the operating policies developed to encourage consistency among the ETV centers. The third document is the draft ETV Guidelines for Proper Use of the ETV Name and Logo (EPA 2007). This document contains the policy and procedures for using the ETV name, logo, or verified data.

#### **Statement of Work**

**This is a continuation of WA 0-06 under contract EP-W-09-024 and WA 4-16 under contract EP-W-04-021. Work already completed under these work assignments shall not be duplicated. The Qualitative Spot Test Kit Verification described in the previous work assignments was divided into six separate tasks. Tasks 1-4 under Phase I were initiated during WA 4-16, which ended on March 2, 2009. Task 5 and part of Task 6 were initiated under WA 0-06 which ended on June 22, 2010. The remainder of Task 5 and majority of Task 6 shall be performed under this follow on work assignment. Activities under Phase I, II and III to be performed under this follow on work assignment are identified in bold under the respective tasks. These activities are not duplicate work. The contractor shall comply with the ETV QMP (<http://www.epa.gov/etv/pubs/600r08009.pdf>), Policy Compendium (<http://www.epa.gov/etv/pubs/600r08025.pdf>), and Guidelines for Proper Use of the ETV Name and Logo (<http://www.epa.gov/etv/pubs/600r08029.pdf>) when performing these tasks.**

**Phase I (The majority of tasks 1 - 4 were completed under work assignments 4-16 and 0-06. Phase 1 activities to be continued in this follow-on work assignment are emphasized in bold)**

**1. Stakeholder Technical Panel**

**Stakeholder activities shall be continued during this follow-on work assignment, on an as needed basis. Deliverables, such as stakeholder meeting minutes, shall also be produced on an as needed basis.**

**2. Development of the Test/Quality Assurance Plan and Verification Protocol**

**2.1 Development of the Test/Quality Assurance Plan (T/QAP)**

**3. Development and Production of Performance Evaluation Materials (Please review this section)**

**4. Vendor recruitment and coordination**

**Phase II**

**5. Verification Testing**

**Verification testing for all four kits was performed under WA 0-06. Under this WA, the contractor shall perform all necessary retesting needed to meet the data quality goals for the project and demonstrate that EPA ETV quality assurance requirements have been met. Retesting will be conducted using the previously tested panels for the kit.**

**The contractor shall allow EPA technical and quality assurance staff to perform an audit, as needed, for some of the retesting.**

**Phase III**

**6. Reporting**

**The Contractor shall complete a written peer-reviewed and quality-assured verification report (VR) for each test kit technology detailing the verification testing results from the testing. Drafts of these reports were developed under WA 0-06. The report must comply with the VR requirements as discussed in the ETV QMP. The observed performance of each kit tested will be described in this verification report. The performance of different test kit technologies will not be ranked. The reports will describe, in addition to each kits' verification performance (accuracy and precision), parameters such as operational factors which include operator observations, ease of use, and sample throughput, specialized training needed, and cost. They will also discuss the role stakeholders played in the project. An appendix which will discuss the PEM preparation/process, deviations, ICP and homogeneity results and the quality of the PEMs will be attached to the verification reports. The**

source file and pdf for this report will be submitted to ETV for publication on the ETV web site. PDF file must be 508 compliant.

In addition to the verification reports described above, the contractor shall develop a verification statement (VS) for each verified test kit. In ETV the VS is usually a 2-5 page summary of the verification report. It is a requirement that this summary is created for each report. The statement must comply with the VS requirements as discussed in the ETV QMP and shall include accuracy and precision data on each test kit as well as information about operator observations, ease of use, sample throughput, training requirements, and cost. The source file and pdf for this statement will be submitted to ETV for publication on the ETV web site. PDF file must be 508 compliant.

### **Schedule of Milestones and Deliverables**

Tasks 5, 6, and, as needed, 1 will be completed under this follow-on work assignment. Activities and tasks performed under the two previous work assignments **will not be duplicated** under this follow on work assignment.

A **work plan and schedule** for the verification reports will be due 5 days from the issuance of this follow on work assignment (WA).

The Contractor shall submit **monthly progress reports** that shall contain, at a minimum, the progress on each task, the costs to date, the reason for any deviations from the project schedule, and a planned expenditure rates for Tasks 5 and 6 and some of the ongoing efforts.

**When a stakeholder meeting is held** minutes are due to EPA within two (2) weeks of each meeting. The source file and pdf for the minutes will be submitted to ETV for publication on the ETV web site. PDF file must be 508 compliant.

**Summary results of verification retesting** is due one week after the end of each testing

**Draft Verification Reports** The draft verification reports for the first three kits will be submitted by June 14, 2010. Draft verification report for the fourth kit is expected by July 15, 2010.

**Completed verification reports and statements** The completed verification reports and statements for the first three kits will be submitted by July 12, 2010. Verification report for the fourth kit is expected by August 12, 2010. Verification testing was accomplished under the previous contract EP-W-09-024. Verification reports and statements should comply with the requirements specified in the ETV QMP. Verification reports and statements must be 508 compliant.

Both parties shall communicate regularly throughout the testing and evaluation process. The Contractor shall obtain COR concurrence on all decisions affecting cost and delivery schedules.

**Performance measures:**

The government shall review the completeness of the internal TSA reports and response, the verification reports and statements, and promptness of submitting these deliverables as required in this work assignment. If the contractor is late by more than 14 calendar days, from the due date specified in the work assignment, the government shall take a 10% reduction in the fee associated with the development of the verification reports and statements for this verification testing, that is, the fee associated with the development of these deliverables for this work assignment. The reduction shall be applied to all fees, both the paid fee and the unpaid fee.

**Period of Performance:** From the date of the Contracting Officer's signature to June 23, 2011.

**Level of Effort:** A total of 292 hours are not to be exceeded for completion of Tasks 5 and 6 and some of the on going efforts from Phase 1. The contractor shall inform the EPA WAM when 75% of the level of effort has been expended.

**Work Assignment Manager**

Julius M. Enriquez  
513-569-7285 (phone)  
513-569-7158 (fax)  
[enriquez.julius@epa.gov](mailto:enriquez.julius@epa.gov)

**Deputy Work Assignment Manager**

Evelyn Hartzell  
513-569-7728 (phone)  
513-569-7158 (fax)  
[hartzell.evelyn@epa.gov](mailto:hartzell.evelyn@epa.gov)

## **Appendix A**

The contractor shall ensure that technology vendors are provided with copies of the ETV QMP, Policy Compendium, Guidelines for Proper Use of the ETV Name and Logo, and the following information:

- Verification testing shall be conducted in accordance with the approved ETV test/QA plan which will be posted on the EPA ETV Web site. Vendors will be provided an opportunity to review and comment on this plan before the test/QA plan is approved by EPA and testing commences.
- Testing shall occur at a predetermined test date(s) and location(s), agreed to by the vendor(s), contractor, and EPA. The test date and location shall not be changed without obtaining agreement from all parties.
- Once verification testing is initiated, it shall be completed in its entirety and the results of the testing shall be published by EPA in a verification report which EPA will post on the EPA ETV Web Site ([www.epa.gov/etv](http://www.epa.gov/etv)). Typically a verification statement is also produced and posted on the EPA ETV Web Site, although a vendor can send a request in writing to the EPA ESTE project manager requesting not to have a verification statement prepared. Vendors will be provided an opportunity to review and comment on the verification report and statement before they are finalized by EPA.
- Verification test data provided to vendors prior to the publication of the verification report may only be used by a vendor if the vendor notes that the data have not been finalized by EPA.
- The vendor will need to assign a technical point of contact for the verification and provide, at no cost to EPA or the contractor, a unit(s) of the technology to be tested, equipment and materials needed to operate the technology during testing, and written descriptions and diagrams of the technology. The vendor assumes all responsibility for any loss or damage of any kind to the technology and any equipment provided by the vendor for verification testing.
- ETV does not endorse, approve, or certify for use any technology that it verifies. Under no circumstances shall the ETV Name or Logo be used in a manner that would imply EPA endorsement, approval, certification, guarantee, or warrantee of the company, its products, its technologies, or its services. Vendors interested in using the ETV name or logo shall need to send a letter to the EPA ESTE project manager stating that they have read and will abide by ETV's name and logo use policy. A copy of the logo use policy is posted on the ETV Web Site at [www.epa.gov/etv](http://www.epa.gov/etv). If EPA or its ETV VOs discover that ETV verification is being misrepresented, the verification will be revoked if necessary. Failure by a developer/vendor or their representative(s) (e.g., licensed distributor, foreign subsidiary, contractor, advertisement agency, etc.) to make the required correction(s) may result in removal of the developer's/vendor's verification report and statement from the ETV Web Site and revocation of the verification report and statement.
- When supplying information to EPA or its contractor, the vendor is responsible for

identifying information that it believes is entitled to confidential treatment for reasons of business confidentiality in accordance with the Agency's regulations at 40 C.F.R. Part 2, Subpart B. The vendor will clearly identify confidential information disclosed to EPA and its contractor in writing and clearly memorialize in writing, within a reasonable time, any confidential information initially disclosed orally. EPA will not disclose, copy, reproduce or otherwise make available in any form information designated as confidential information without the consent of the vendor, except as such information may be subject to disclosure under the Freedom of Information Act (5 U.S.C. § 552), and EPA's regulations at 40 C.F.R. Part 2, or as otherwise authorized by law. Clauses have been included within EPA's contract with its contractor addressing the treatment of confidential information.

- With the exception of confidential information (see previous bullet for information on identifying confidential information and how this information will be treated by EPA and its contractor), ultimately all other procedures, data, results, reports, and statements, developed or generated during the verification process for a vendor's technology may be made available to the public.

United States Environmental Protection Agency  
Washington, DC 20460

## Work Assignment

Work Assignment Number  
1-0☐ Original ☒ Amendment Number: 1Contract Number  
EP-W-09-024Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Measurement and Evaluation Plan for the  
E3 (Economy, Energy, and the Environment)  
Initiative"

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW

See the attached Statement of Work

Purpose: ☐ Work Assignment Initiation ☐ Work Assignment Close-Out  
☒ Work Assignment Amendment ☐ Incremental Funding  
☒ Work Plan Approval

Periods of Performance

From: 06/28/10

To: 06/22/11

Comments:

This amendment partially approves the Technical and Financial Work Plan dated 30 July 2010, capping the cost at \$84,000.00. The LOE is capped at 471 Professional Labor Hours.

☐ Superfund

## Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 6)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

## Authorized Work Assignment Ceiling

Contract Period:	Cost/Fee	LOE
Previously Approved	\$0.00	471
This Action	\$84,000.00	0
Total	\$84,000.00	471

## Work Plan / Cost Estimate Approvals

Contractor WP Dated : 07/30/10	Cost/Fee:	LOE:
Cumulative Approved: 08/22/10	Cost/Fee: \$84,000.00	LOE: 471

Work Assignment Manager Name

REBECCA S. COOL

Branch/Mail Code 7409M

Phone Number (202) 564-9138

Fax Number (202) 564-8901

(Signature)

(Date)

Project Officer Name

SINETA WOOTEN

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code

Phone Number

Fax Number

(Signature)

(Date)

Contracting Official Name

DENNIS J. BUSHTA

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

(Signature)

(Date)

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# "Measurement and Evaluation Plan for the E3 (Economy, Energy, and the Environment) Initiative"

Contract: EP-W-09-024, Work Assignment: 1-07, Amendment: 0001

## Summary Information

Title: "Measurement and Evaluation Plan for the E3  
(Economy, Energy, and the Environment) Initiative"  
Period of Performance: From: 06/28/10  
To: 06/22/11  
Award Date: 06/28/10  
Total Funding:

## Procurement Management Roles

*The following item(s) have been modified:*

ADMINISTRATIVE CONTRACTING OFFICER:

U.S. E.P.A.  
Attn: DENNIS J. BUSHTA  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 3803R  
Phone Number: (202) 564-2182  
Fax Number:  
E-Mail Address: edwards.christine@epa.gov

## WA Totals

*The following item(s) have been added:*

Category	POP	Amount
Estimated Cost	Option 1	\$ (b)(4)
Fixed Fee	Option 1	



United States Environmental Protection Agency  
Washington, DC 20460

Assignment Number

## Work Assignment

☒ Original ☐ Amendment Number:

Contract Number  
EP-W-09-024

Contract Period  
Base

Option Period Number

Title of Work Assignment  
"Measurement and Evaluation Plan for the  
E3 (Economy, Energy, and the Environment)  
Initiative"

Contractor  
BATTELLE MEMORIAL INSTITUTE

Specify Section and Paragraph of Contract SOW  
See the attached Statement of Work

Purpose: ☒ Work Assignment Initiation ☐ Work Assignment Close-Out  
☐ Work Assignment Amendment ☐ Incremental Funding  
☐ Work Plan Approval

Periods of Performance

From: 06/28/10

To: 06/22/11

Comments:  
Work Assignment Initiation

☐ Superfund

### Accounting and Appropriations Data

☒ Non-Superfund

Line	DC (Max 6)	Budget/FYs (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class	Amount	(Dollars)	(Cents)	Site/Project (Max 6)	Cost Org/Code (Max 7)
1											
2											
3											
4											
5											

### Authorized Work Assignment Ceiling

Contract Period: Cost/Fee LOE  
Previously Approved

This Action

Total \$0.00 471

### Work Plan / Cost Estimate Approvals

Contractor WP Dated : Cost/Fee: LOE:

Cumulative Approved: Cost/Fee: \$0.00 LOE: 471

Work Assignment Manager Name

REBECCA S. COOL

(Signature)

(Date)

Branch/Mail Code 7409M

Phone Number (202) 564-9138

Fax Number (202) 564-8901

Project Officer Name

SINETA WOOTEN

(Signature)

(Date)

Branch/Mail Code 7404T

Phone Number (202) 566-0501

Fax Number (202) 566-0469

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code

Phone Number

Fax Number

Contracting Official Name

CHRISTINE EDWARDS

(Signature)

(Date)

Branch/Mail Code 3803R

Phone Number (202) 564-2182

Fax Number

Contractor Acknowledgement of Receipt and Approval of Workplan (Signature and Title)

Date

# **"Measurement and Evaluation Plan for the E3 (Economy, Energy, and the Environment) Initiative"**

Contract: EP-W-09-024, Work Assignment: 1-07

---

## **Summary Information**

Title: "Measurement and Evaluation Plan for the E3  
(Economy, Energy, and the Environment) Initiative"  
Period of Performance: From: 06/28/10  
To: 06/22/11  
Award Date:  
Total Funding:

## **Procurement Management Roles**

### **WORK ASSIGNMENT MANAGER:**

U.S. E.P.A.  
Attn: REBECCA S. COOL  
1200 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20460

Mail Code: 7409M  
Phone Number: (202) 564-9138  
Fax Number: (202) 564-8901  
E-Mail Address: cool.rebecca@epa.gov

## **Attachments**

Attachment Name

---

SOW/Measurement and Evaluation Plan for the E3 (Economy, Energy, and  
the Environment) Initiative

# **SOW/Measurement and Evaluation Plan for the E3 (Economy, Energy, and the Environment)**

Contract: EP-W-09-024, Work Assignment: 1-07

---

**Contract Number: EP-W-09-024**

**Work Assignment: 1-07**

**Title:** Measurement and Evaluation Plan for the E3 (Economy, Energy, and the Environment) Initiative.

**Purpose:**

This work assignment will provide support for the development of a Measurement and Evaluation Plan for the E3 (Economy, Energy, and Environment) Initiative

**I. Background:**

The E3 initiative is a collaboration among the U.S. EPA, the Department of Energy, the Department of Commerce, the Department of Labor, and the Small Business Administration to bring economic prosperity, energy efficiency, and environmental stewardship to communities. This initiative involves city government, local environmental and lean experts, a local utility, utility customers and/or suppliers, and federal agencies. It pulls together federal, state and local resources to provide technical assistance in lean and clean, energy efficiency and carbon foot-printing to utility customers and/or suppliers to reduce the environmental impact on a community-wide basis.

The initiative integrates the EPA's Green Suppliers Network 'lean and clean' process review with the Department of Energy's on-site energy audit into one customized technical review. Manufacturers receive a detailed report with specific strategies for reducing their waste and using materials and energy more efficiently. Through the EPA's Climate Leaders program, manufacturers also receive a Greenhouse Gas Evaluation that includes on site technical resources to help them establish their own carbon footprint, using the Climate Leaders new simplified GHG calculator.

Under this initiative, pilot projects have been completed in San Antonio, Texas, and Columbus, Ohio and are underway in Michigan and Alabama. This initiative is being supported in large part by the Manufacturing Extension Partnership program of NIST and its contractor, and the Department of Energy's Industrial Technologies Program and its network of Industrial Assessment Centers.

The outcome of a one-day workshop on measuring "technical assistance program effectiveness", held in mid-November 2009, will be extremely helpful in developing a Measurement and Evaluation Plan for E3. The contractor will use the results of this workshop in development of the measurement and evaluation plan for E3.

This workshop assembled a small group of experts in the field of measuring "technical assistance program effectiveness". These technical assistance programs include both pollution prevention as well as energy efficiency programs. The objectives of this workshop were to:

- Examine the current state of thinking about how program effectiveness can be/is being measured, for programs seeking to influence business and individual

# **SOW/Measurement and Evaluation Plan for the E3 (Economy, Energy, and the Environment)**

Contract: EP-W-09-024, Work Assignment: 1-07

---

- behavior with respect to energy efficiency and environmental management.
- Explore the development of predictive models of program impact which might help program managers better understand the relationship between programmatic activities, such as outreach, education, network creation, and desired environmental/energy outcomes.
- Determine what data are required to construct or operate such models, and identify gaps in current data collection practices.
- To identify key functional attributes/requirements of future data systems intended to manage the effectiveness of such programs.

## **II. Scope of Work:**

### **Task 1: Measurement and Evaluation Plan for E3**

The contractor shall assemble a workgroup of technical experts in the field of program effectiveness measurement. The individuals selected by the contractor shall be provided to the WAM for approval. This workgroup shall meet between 3-5 times during the performance period of the contract.

Using the recommendations of the technical experts workgroup, as well as the recommendations of the conference described above, the contractor shall develop a draft blueprint for the 5 federal agencies (EPA, DOE, DOC/NIST/MEP, DOL, and the SBA) participating in the E3 initiative that identifies the most appropriate ways to collect direct impacts data. This blueprint will address the individual reporting requirements of all 5 agencies as well as the collective reporting requirements for E3. The contractor shall verify the recommended approach with various local technical assistance providers. Based on the feedback received, the contractor shall develop final recommendations on the most effective information gathering devices to collect information necessary to fully evaluate the effectiveness of the E3 program. This blueprint shall assist in the development of a sophisticated data collection instrument that shall demonstrate direct causal links for all E3 impacts including, energy and environmental outcomes.

### **Task 2: Forecasting Tools**

The contractor shall develop a set of forecasting tools that will help program managers project the outcomes of different program investment options and strategies.

### **Task 3: Measurement Implementation**

The contractor shall lead, or participate in, the implementation of the E3 program measurement system (likely with an implementation partner).

# **SOW/Measurement and Evaluation Plan for the E3 Economy, Energy, and the Environment)**

Contract: EP-W-09-024, Work Assignment: 1-07

---

## **III. Deliverables:**

<b>Task</b>	<b>Deliverable</b>	<b>Due Date</b>
	<b>Work Plan</b>	<b>15 calendar days after contractor receives the work assignment</b>
<b>1</b>	<b>Documented Measurement and Evaluation Plan</b>	<b>30 days following approval of the work plan</b>
<b>2</b>	<b>Forecasting Tools</b>	<b>60 days following the approval of the work plan</b>
<b>3</b>	<b>Implementation of Measurement System</b>	<b>90 days following the approval of the work plan</b>

This work assignment relates to Task II: Data Analysis, Subtask 2, of the current Statement of Work (SOW).

## **IV. Period of Performance:**

This work assignment will start on the date of the contracting officer's signature and extend through June 22, 2011.

## **V. Level of Effort:**

This work assignment shall require 471 professional hours. No work performed under previous work assignments will be duplicated under this work assignment. EPA will approve the work plan within 45 days of receipt. A QA plan is not required. A work plan is required. CBI does not apply.

## **VI. EPA Contacts:**

### Contracting Officer Representative:

Rebecca S. Cool

Pollution Prevention Division (7409M)

Voice: 202-564-9138

Fax: 202-564-8901

Email: cool.rebecca@epa.gov

### Mailing Address:

1200 Pennsylvania Ave. NW

Washington, DC 20460

# **SOW/Measurement and Evaluation Plan for the E3 (Economic, Energy, and the Environment)**

Contract: EP-W-09-024, Work Assignment: 1-07

---

**Delivery Address:**

Room 5303EE, EPA East  
1201 Constitution Ave. NW  
Washington, DC 20004

1

**EPA**United States Environmental Protection Agency  
Washington, DC 20460**Work Assignment**

Work Assignment Number

1-09

☐ Other ☐ Amendment Number:

Contract Number

EP-W-09-024

Contract Period 06/23/2009 To 06/22/2011

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

See Comments

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and paragraph of Contract SOW

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☒

Work Plan Approval

Period of Performance

From 12/16/2010 To 06/22/2011

Comments:

Taxonomic Identifications and Comparisons  
for the 2010 National Coastal Condition Assessment

This action approves the Work Plan dated January 19, 2011.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										

## Authorized Work Assignment Ceiling

Contract Period

Cost/Fee:

\$0.00

LOE: 500

06/23/2009 To 06/22/2011

This Action:

\$124,919.00

28

Total:

\$124,919.00

528

## Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

02/19/2011

Cost/Fee:

\$124,919.00

LOE: 528

Cumulative Approved:

4/5/2011

Cost/Fee:

\$124,919.00

LOE: 528

Work Assignment Manager Name Marla Smith

Branch/Mail Code:

Phone Number 202-566-1047

FAX Number:

(Signature)

(Date)

Project Officer Name Cynthia Bowie

Branch/Mail Code:

Phone Number: 202-564-7726

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Christine Edwards

Branch/Mail Code:

Phone Number: 202-564-2182

FAX Number:

(Signature)

(Date)